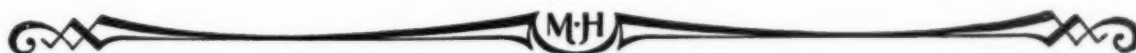


# THE MODERN HOSPITAL



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## The Hospital and the Law

By EDGAR CHARLES HAYHOW

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**M**EDICAL jurisprudence has, for many years, been an established part of the medical school curriculum; a knowledge of law as it affects medicine in general and the physician, in particular, is a fundamental prerequisite for every medical practitioner.

But coincidental with medical practice, the tremendous expansion of hospital activities and work is of significant importance in the nation's social and economic scheme. The expansion has emphasized the need for a concise review of the laws that have been enacted affecting the various ramifications of hospital performance, which are embodied as a part of the consolidated laws of the several state statutes.

The law as it specifically affects hospitals has grown to a complex mass; new legislation is continuously changing the legal status of hospital organization; new statutes are established; court decisions occupy the attention of governmental and civil authorities, and what is the law today may not be law tomorrow.

In what way is this growth of hospital law affecting hospital management? The answer is simply that progressive boards and administrators are recognizing this increased development of hospital jurisprudence, and that the efficient superintendent is forced to equip himself with a knowledge of those laws directly affecting his province.

A superintendent cannot, simply by virtue of his office, be a physician, a business man, a sociologist, an accountant and an attorney, but he is responsible nevertheless for compliance with the law.

Daily routine presents to every executive problems of legal concern, and a lack of knowledge of these matters on his part can involve the institution in litigation and financial difficulties and, at the same time, can engender unfortunate public opinion. Problems affecting trusteeships, wills and bequests, permission for operations and necropsies, liabilities for torts and contracts, and liabilities for negligence are but a few of the questions constantly referred to the superintendent for his action. He must be able to distinguish between those matters which are within his jurisdiction and ability to answer, and those that should be passed on to legal authorities and officers of the institution for their attention and action.

How can a superintendent become familiar with the essentials of hospital law? What is its source?

To answer these questions, let us separate hospital law into three main classifications:

1. Laws that relate to the government, rights of ownership, or the creation, control and legal authority of the institution.

2. Laws that affect the trusteeship of the hospital, embodying matters of license, public policy, taxation, liabilities and endowments.

3. Laws that apply directly to the professional management of the hospital in relation to its organization and administration.

Hospitals are grouped into two divisions—public and private. These are often referred to as governmental and civil, and they are subdivided as shown in the accompanying chart.

#### *Three Main Sources of Hospital Law*

The source of the law governing the various kinds of institutions may be found principally as follows:

1. The constitution of the United States grants powers to provide adequate hospitalization for governmental use, as, for example, the military and naval establishments; hospitals for the rehabilitation of war veterans; public health institutions which admit persons qualified by right to governmental care; special governmental institutions providing for immigration detention and quarantine, and special hospitals (tuberculosis, neuropsychiatric, feeble-minded and leper) for the care and treatment of federal charges. As the District of Columbia and United States territories are under direct federal jurisdiction, all general and special hospitals in these territories are subject to the federal laws affecting them.

2. State constitutions and state legislatures make provision through special or general acts as follows: (a) Medical institutions may be established within their respective territories, as governmental agencies under public control, by the states, counties, cities and townships, individually, for the institutionalization of such persons needing hospital or custodial care as may be included in the various classifications of medical and social conditions. These institutions may or may not be limited to the care and treatment of indigent patients; they may be general or special in character. Together they represent the large majority of the institutions throughout the country for the care and treatment of mental, tuberculous, contagious and epileptic conditions, and institutions for the blind, for children, for the aged and for the feeble-minded. (b) The various state legislatures have full power to authorize the establishment of private hospitals, either proprietary or charitable, for profit or not for profit. In fact, each state may act at its discretion in regulating laws governing matters of ownership, performance, taxation, state aid, industrial hospitalization, liabilities, professional relationships, it being assumed, of course, that such legislation is not contrary to federal provision or authority.

3. The third source of hospital law, and that which embraces the bulk of hospital litigation is what is known as the common law. Here is to be

found a compilation of court interpretations and court decisions relating to various subjects which are not specifically regulated by definite statutes, and which are not covered by special provisions either in the federal or in the state constitutional laws.

There is no special set of laws concerning the creation, the organization and the incorporation of hospitals. The procedure to establish and undertake a hospital venture is identical with the organization of any other type of business enterprise. On the basis of legal relations, hospital undertakings are frequently organized and operated under either one of four forms of business management, namely, (1) natural persons, (2) partnerships, (3) joint stock companies and (4) corporations. In accordance with state laws, any type of organization may assume as limited an enterprise or undertake as elaborate a plan as its organization charter specifies.

#### *How the Classifications Differ*

The distinction of these various business classifications is as follows:

1. Natural Persons: As a sole proprietor, an individual may commence business without the formality of legal documents, procedures of organization or private taxation. The capital invested in the business need not be specified and the sole proprietor is unlimitedly liable (including his most personal property) for all the debts of his business.

2. Partnerships. A partnership is a contractual association of two or more persons in a common endeavor created usually under an agreement as to the affairs of the business, the amount of funds invested and the distribution of profits and losses, and dissolved automatically upon the death or failure in mental condition of any one of the partners, or by bankruptcy of the partnership. The liability of partners is unlimited and in the case of a contracted debt by one partner, all other partners are liable to the extent of their individual assets, including personal property. It can be readily seen that this form of business may be satisfactory and that it is not subject to legal measures of incorporation.

3. Joint Stock Companies: Gerstenburg says: "This form of management has the organization of a corporation, that is, members elect directors who elect officers. The members are not general agents of the business but have the joint and several liabilities of partners. Because of continuous life, it may issue a long term note and bonds, impossible to partnership."

4. Corporations: A corporation is defined as follows in the "Century Dictionary": "An artifi-

cial person, created by law, or under the authority of law, from a group or succession of natural persons, and having a continuous existence, irrespective of that of its members, and powers and liabilities different from those of its members."

Acknowledging the difference of these various forms of business relationships, what is the advantage, or disadvantage, of each as they apply to hospital organization? Under what circumstances would it be advisable to operate a hospital under a sole proprietorship, a partnership or a corporation?

#### *The Advantages of the Three Forms*

The most typical example of hospitals operated under sole proprietorship are small institutions, usually owned and operated by individual physicians in connection with their practice. Included also in this group are institutions for the care and treatment of special conditions, such as mental, nervous, alcoholic, drug addicted and tuberculous patients.

In this instance Doctor X maintains and operates his own institution in accordance with his own dictates. He is not required to submit detailed organization reports; he is relieved of the numerous state and federal organization taxes, although he is not exempt from personal property or income tax. In short, he has all the rights and privileges of any sole proprietor and is subject to public jurisdiction only insofar as his institution must conform to the hospital and the health codes. By this same token, he is solely responsible for all debts of the institution and is personally liable for breaches of contract, negligence and nuisances.

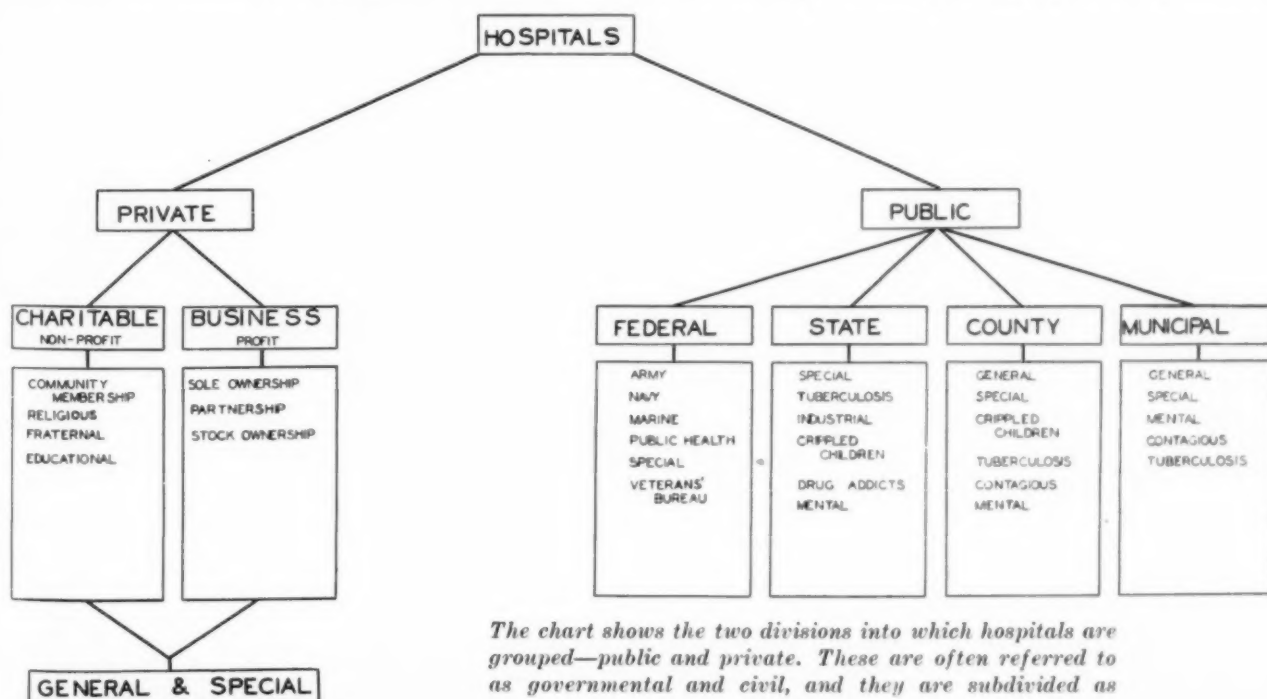
It often happens that two or more persons desire to own and operate a private hospital or sanatorium as a professional or business venture, without being subject to all the requirements of incorporation. These persons can enter a contractual relationship of copartnership, and by so doing must conform to all existing laws of copartnership.

The principal advantages of a partnership are: (1) it does not require submitting detailed financial and organization reports; (2) it eliminates the payment of numerous state and federal taxes, and (3) it provides a personal element to the affairs of management without corporate stockholders or members.

Corporations embrace the great majority of hospital organizations. The accompanying chart shows that corporations are divided into two main classes, public and private. The private hospitals are further subdivided as to corporations for profit and corporations not for profit. Various synonyms are used to differentiate this group, the more common of which are stock and membership, proprietary and charitable, business and eleemosynary, although the majority of states separate these by law into the stock corporation laws and the membership corporation laws.

#### *A Definition of Public and Private Hospitals*

There is apparently considerable confusion in the minds of laymen as to what constitutes a public hospital, a charitable hospital and a private hospital. A question that is usually perplexing is whether a private hospital is required to render free care if it receives public or community support through municipal appropriations, financial



*The chart shows the two divisions into which hospitals are grouped—public and private. These are often referred to as governmental and civil, and they are subdivided as shown.*



campaigns and membership funds. Public and private hospitals are defined as follows by Lapp and Ketcham in "Hospital Law":

"A public hospital is one which not only serves a purpose for the whole community, but is subject to the management, control and direction of the community through the government.

"A private hospital is one that may perform the same services for the people of a community, but is subject to the direction of private individuals or a private corporation."

#### *What Constitutes a Charitable Institution?*

Therefore, any hospital under the immediate direction and control of federal, state, county, city or township management, whether it accepts free cases or charges for services rendered, is a public hospital. On the other hand, all institutions that are under private management, whether they accept municipal appropriations or not, whether the citizens through taxation or otherwise contribute to their support, are private hospitals, and are not to be confused with public institutions.

We now come to the question, What constitutes a charitable institution? Is there a distinction between the term public charity and public hospital?

"An institution that is established, maintained and operated for the purpose of taking care of the sick, without profit, or view to profit, but at a loss, which has to be made up by benevolent contribution, is a charity. If in addition to this, the institution is one, the benefits of which the public are generally entitled to enjoy, it is then a purely public charity—public because although not owned by the public, its uses and objects are public; purely public because its uses and objects are wholly public, and for the benefit of the public generally and in no sense private as being limited to private individuals."<sup>1</sup>

Therefore, a hospital that is private in nature may be termed a charitable institution, may charge any amount for service rendered, and at the same time may accept income from outside sources, such as bequests, gifts and other appropriations. "The criterion in this class of case seems to be that whatever is done or given gratuitously in the relief of public burdens or for the advance of the public good is a public charity."<sup>2</sup>

There seems to be a growing tendency, especially in urban centers, to organize private hospitals as purely business ventures and to operate them on the plan of the de luxe hotel. A group of individuals organize what is known as a stock corporation, that is, "a corporation having capital stock divided into shares and which is authorized by law to distribute to the holders thereof div-

idends or shares of the surplus profits of the corporation."<sup>3</sup>

A hospital organized with a view of paying dividends to its stockholders cannot include in its scheme of things a comprehensive charitable or educational program. It is generally organized to cater to the private room patient exclusively, and by necessity offers a service which can demand a charge in excess of the daily cost of maintenance. This form of organization is the same as any moneyed or business corporation, and, as will be explained in detail later, it enjoys all the privileges and assumes all the responsibilities and liabilities of any profit making corporation.

The private charitable hospital represents the bulk of the medical institutions in the country. This type of hospital is organized under the laws governing nonstock or membership corporations. Its object is solely charitable without profit in view. It is known by the various terms of membership, nonstock, eleemosynary, charitable or philanthropic institution.

The incorporation of a hospital in preference to operating it under the other forms of business control has the following advantages: (1) it limits stockholders' liabilities to definite amounts; (2) it provides distinct legal entity for all business purposes; (3) the organization is given stability and permanence; (4) the different interests in the corporation and its property are represented by transferable shares; (5) the business is managed by an elected board of directors, acting through officers and agents; (6) there is greater ease in securing capital because of the safeguards and advantages of the corporate form.<sup>4</sup>

The essentials of all charters are comparable in that they must contain the following information: the corporate name of the institution; the purpose for which it is formed; the names and addresses of the original incorporators; the address of the principal place of business; details as to fees, places for filing and the registration.

#### *The Constitution and By-Laws*

A membership corporation, created by or under a general or special act, may have a constitution, by-laws and rules, which shall be collectively known as by-laws, and which may provide methods for amendments.

A constitution is a written evidence specifically embodying the principles, the policies, the rights and the privileges of incorporation as designated under any state code of corporation. It is usually divided into a series of articles, sections and paragraphs, each article definitely relating to a specified classification as:<sup>5</sup>

Article I. Name of corporation.



Article II. Object. The object is to maintain and operate a hospital for the purpose of affording surgical and medical care, to any color, creed or nationality, excepting such cases as chronic and contagious diseases, alcoholic and mental cases.

Article III. Membership. This provides for the classifying of memberships contributing varying amounts, and establishes classes for life, sustaining, contributing and honorary members.

Article IV. Property. This gives special reference to the acquisition of funds and ownership of real property.

Article V. Annual meetings. Order of business: report of the president; report of the treasurer; report of the president of the medical board; report of the standing committees; report of special committees; report of the superintendent; report of the women's auxiliary; report of the junior auxiliary; unfinished and new business; elections.

Article VI. Government. This provides for the election of officers and specifies how officers shall be elected. The government of the affairs, funds and properties of the association, and its right to appoint agents and staffs are outlined.

Article VII. Endowments.

Article VIII. Amendments.

The general classification of the by-laws is as follows: officers and their duties; meeting of the directors; quorum; standing committees; duties of committees; auxiliary committees or boards; professional staffs; endowed beds; order of business, and changes in by-laws.

#### *No One Law Containing Hospital Statutes*

It has been shown that throughout the country today the accepted form of private hospital, as distinguished from the municipal hospital, is incorporated under the jurisdiction of state charters. The legislatures of the states sanction the physical creation of the institution, and according to their individual laws definitely provide for the proper care of patients, for proper sanitation and for proper control of laboratories, dispensaries and pharmacies. There is no one specific law containing the statutes of all hospital affairs, which is comparable to the situation that all laws affecting corporations cannot be found in the general corporation law. The more important laws in the individual states containing chapters or sections of hospital significance may be listed as the general corporation law, the membership corporation law, the law of charities or poor law (associations not for pecuniary profit), public health laws, penal laws, and state educational laws.

Probably the most discussed phase of hospital law occupying the attention of hospital authorities is that section dealing with liabilities.

When is a hospital liable? Are the liabilities of hospitals with regard to contracts, negligence and injuries comparable with those of other institutions, such as hotels?

Liabilities are divided into two classifications, contracts and torts. A tort is defined by "Webster's International Dictionary" as "Any wrongful act (not involving a breach of contract) for which a civil action will lie."

Generally speaking, directors of institutions have the right to appoint their agents, and contracts made in good faith by the agents are at once liabilities of the corporation, irrespective of the type of the hospital concerned—public, charitable or private.

The question of torts presents an entirely different aspect.

#### *Liability of Private Hospitals for Profit*

The laws of the various states clearly define the difference between private, charitable and public hospitals, and all states agree that private hospitals for profit have approximately the same responsibilities under the law as other profit making institutions.

These are liable for negligence or misconduct on the part of their officers and employees on the grounds that private institutions are obliged to render reasonable care for their patients' safety. They are obliged to provide modern equipment and facilities, and to render efficient professional treatment and reasonable nursing skill.

While the liability of charitable institutions seems to have a somewhat different interpretation, there is no policy or theory which definitely establishes liability or nonliability on the part of charitable institutions for injuries to patients. A review of court opinions and interpretations in the various state records presents many apparent inconsistencies, although there seems to be an agreement that it is against public policy to hold charitable institutions liable for such acts of their servants, provided the servants were selected with due care, on the grounds that:

1. A large part of the monies received by charitable institutions is donated for definite charitable purposes and, therefore, cannot be diverted to the payment of judgments.

2. When a patient accepts charity from an institution, that in itself constitutes a waiver of claim for negligence.

3. It is against public policy to hold charitable institutions liable for the acts of negligence on the grounds that these charities are maintained without any view to profit, and admit patients regardless of race, color or creed, and irrespective of their social or financial status.

It is a generally accepted theory that public institutions are not liable in the case of injuries to patients resulting from negligence or carelessness on the part of agents or employees on the grounds that municipalities exercising or performing governmental duties are immune from liabilities when acting within their legislative power. In view of the foregoing, every state record contains innumerable cases citing that charitable hospitals are not liable in damages to either free or paying patients for injuries suffered due to negligence on the part of nurses, doctors or employees. Yet in face of all these precedents, one can never be certain of court or jury decisions for the reason that the records contain contrary precedent in case after case where charitable institutions have been held liable for injuries to patients caused by direct negligence on the part of employees.

Assuming a knowledge of the law as it affects charity patients injured in charitable institutions, what is the liability toward a private patient who is injured? Does the same reasoning apply if a stranger is injured while visiting a patient? While cases have been decided against such institutions, it is accepted that where due care has been used in the selection of employees or agents, a private charitable hospital, conducted for benevolent and

philanthropic purposes, is not responsible to a patient for damages received through the unskillfulness or carelessness of servants, attendants or physicians, even though the services are paid for.

Physicians who are in general practice and on the staff of hospitals may be held personally, rather than the hospital, for malpractice on the grounds that they are not in reality servants of the hospital; and that the hospital cannot direct their work, and is, consequently, not responsible for it.

The appellate division of the Supreme Court of New York State rendered a decision in the case of *Bernstein versus Beth Israel Hospital*, in 1923, to the effect that "A doctor engaged by the hospital to act as intern and to perform his work under the direction of other doctors, who is to receive his room, board, laundry work and free uniforms as compensation and is subject to discharge, is an employee of the hospital, and the finding of the state industrial board to that effect is affirmed."

(To be continued)

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- <sup>1</sup>Lapp and Ketcham, *Hospital Law*, Bruce Publishing Co., Milwaukee, 1926, p. 26.  
<sup>2</sup>Ibid, p. 28.  
<sup>3</sup>Gerstenburg, Charles W., *Materials of Corporation Finance*, p. 24.  
<sup>4</sup>Conyngton, Thomas, *Corporate Organization and Management*, p. 4.  
<sup>5</sup>Weber, J. J., *First Steps in Organizing a Hospital*, The MacMillan Company, New York City, p. 145.

## Is an Open Ward Better Than a Cubicle Unit for Children?

The following letter has been received by the editor of *THE MODERN HOSPITAL* from Martha M. Russell, directress of nurses, Municipal Colony Hospitals, Trenton, N. J., who tells why, in her opinion, the open ward is better than a cubicle unit for children:

"The November number of *THE MODERN HOSPITAL* contained an article on the use of screens in children's wards, a practice which, as the authors say, has been 'generally accepted.'

"Perhaps my opinion on the subject is too personal to be of any interest, but since every building procedure in these days must answer the challenge of being essentially useful, I should like to give the reasons why I do not believe the conclusions stated in the article should be accepted as the final word.

"As I observed the frequent introduction of screens of glass, either fixed or movable, in children's wards all over the country I accepted the device as probably desirable and was glad when I found such screens in place in the contagious wards of our hospital. Three years of experience, however, have changed my opinion. I now have come to the conclusion that the device is more plague than profit, and I challenge the installation as undesirable both on account of inconvenience and expense.

"In every ward there should be at least five feet of space between the beds. This distance is sufficiently great to prevent the transfer of spray and the passing of toys from bed to bed without assistance. The hands of the

nurse can be just as dangerous even if the nurse walks around a glass screen before attending to the second patient if she fails to wash her hands and change her gown.

"There may be a suggestion of separation in the cubicle system, but it does not eliminate slips in technique, and I feel that a less expensive means of utilizing individual equipment would be equally satisfactory. The need for aseptic technique must be realized by each person who comes to the patient's bedside regardless of the mechanical aids or hindrances the building provides.

"In the winter it is possible to prevent drafts and maintain good ventilation in the ward by means of double windows, doors opening into sun porches or some similar arrangement. In the summer the glass screens make a hot box in which both the patient and the nurse gasp in mutual discomfort.

"When the children are dangerously ill the screens simply make more steps for the nurse. When the children are convalescent and do not need to be kept in bed constantly they are happier in an open ward, and it is easier to keep the place reasonably tidy.

"It is not so important to provide privacy for young patients as it is for adults. When children are dangerously ill or the diagnosis is not entirely verified, small rooms equipped with toilet facilities are essential and should be provided in sufficient numbers. When children are convalescing an open ward serves as a happy play school.

"This type of child care is certainly better for the children, both mentally and physically, than strict confinement in one cubicle. We should make it our objective to release a child with better health habits and better manners because of his hospital experience."

# Better Food and the Satisfied Patient

By MAX ABELMAN

Jewish Hospital of Brooklyn, Brooklyn, N. Y.

**F**OOD is without question one of the important and helpful restorative factors in nursing the sick back to health.

At the Jewish Hospital of Brooklyn, Brooklyn, N. Y., food has played a highly important part in restoring to health the thousands of sick in the community, through a well established and well organized dietary department. More than 90,000 meals are served in this hospital each month, which is an average of about 1,000 at each mealtime.

Under the direct supervision of Sara Klau, assistant superintendent of the hospital, a force of ten college trained dietitians are kept constantly busy with the tremendous amount of detail work involved in caring for the wants of more than 600 patients. All these dietitians are graduates of recognized home economic schools, with a major in nutrition. In addition, the hospital has established a six months' course for graduate dieti-

tians which is equal to an internship. During this period the dietitian is called a "student dietitian." The course gives her experience in all the different phases of the department, such as administrative, medical and purchasing.

The medical staff of the hospital is keenly interested in the newest scientific discoveries of combinations or changes in foods affecting vitamins and caloric values. The medical staff cooperates with the dietary department in bringing to the patient the benefits of research work in food values. The staff keeps close watch of the sanitary conditions of the department. Milk is tested weekly in the laboratories for bacteria and fat content, and milk and other foodstuffs are constantly analyzed for chemical and bacteriological values.

The food is of the finest quality. It is cooked and served under efficient and sanitary conditions,



*Roasting 150 chickens a day is one of the many tasks performed in the main kitchen of the Jewish Hospital of Brooklyn. The chef in the center is ready to place a pan full of chickens in the oven.*





*All food is carefully weighed in the metabolic kitchen, where special diets are prepared under the supervision of a trained dietitian. The lower picture shows a section of the main kitchen where 350 pounds of meat are carved daily.*



The fact that 8,000 pounds of poultry are used each month at the Jewish Hospital of Brooklyn makes poultry cleaning an important daily task at the institution. One man is kept busy the entire day doing this work.



and its best nutritive properties are retained. There is the least possible handling of food by the workers. Modern machinery, such as meat, cheese and bread slicing apparatus, and potato paring and vegetable dicing machines, is used throughout. A dishwashing machine washes and sterilizes all the dishes, silverware and glassware used in the institution.

#### *Hotel Plan of Service Used*

The food is piping hot when it reaches the patient. The large aluminum food trucks, with compartments for the various foods, such as soup, meat and vegetables, are heated by electricity before being loaded. When the trucks are filled they are taken to the various floors, where they are turned over to the dietitian in charge. She scrutinizes the trays to make sure that the instructions of physicians and requests of the patients have been carried out. The hotel plan of service is used, menus being handed to the patients from which they select the food that pleases their fancy, subject of course to the orders of their physicians. Where delicacies are required to help restore the health of a patient the hospital does everything possible to provide these.

The metabolic kitchen is separate from the main

kitchen. Food for special diets is prepared there under the supervision of a trained dietitian. It is distributed directly to the patients who require specially prepared foods.

Each month the hospital uses approximately 8,000 pounds of poultry, 10,163 pounds of meat (this includes lamb, liver, beef and veal), 1,944 pounds of smoked and cured meats, 2,200 pounds of fish, 4,800 dozens of eggs, 28,800 quarts of milk, cream and buttermilk and 4,300 loaves of bread. Between six and eight barrels of apples are used each week.

Three crates of fresh tomatoes are used daily, thirty pounds to the crate; five crates of lettuce, four dozen heads to the crate; seven crates of cauliflower, one and one-half dozen to the crate; two crates of carrots; a crate of fresh peas; a crate of string beans; three crates of pineapples, twenty-four to the crate; fifty pounds of coffee; 100 pounds of butter; eight boxes of oranges (126 to 176 in a box); 175 pounds of sugar; twenty pounds of tea; twenty pounds of cocoa; seven pounds of malted milk.

Cereals play an important part in the daily menu, and oatmeal, cornmeal, corn muffins, bran and bran muffins, bran cereals, rice and other cereals are included in the daily diet.

A chef, three cooks, a baker and a baker's assistant are employed in the kitchen. There is also a butcher who works constantly, cleaning and preparing the poultry and meats. Two salad men are required to prepare the salads. One man is needed to prepare the five bags of potatoes which are used daily. The potatoes are pared by machine. Two vegetable men are necessary to prepare the daily quota of vegetables. Chiefly fresh vegetables are served to the patients.

All persons who handle food are given a thorough health examination before being employed, and the condition of their health is constantly watched by the head of the department.

All deliveries are made to the commissary department, which consists of a department head and four assistants. Supplies are distributed to

the various diet kitchens only upon written requisition to the commissary department. An electric truck is used to transport the supplies.

The hospital, in addition to feeding over 600 patients daily, has a family of approximately 726 employees, for whom four cafeterias are maintained, one for the interns, one for the nurses, one for the clerical help and another for the porters, the maids, the aids and the orderlies. There is also a cafeteria for visitors, which is well patronized.

The dietary department budget is \$240,000 a year, which is inadequate considering the large number of specialized technicians needed.

The purchase of supplies is under the direction of Jacob Bass, executive director of the hospital. A statistical assistant and his staff keep a daily cost record for every item used in the institution.

## Meeting Our Medico-Economic Problem

By FREDERIC A. BESLEY, M.D.

Professor of Surgery, Northwestern University  
Medical School

The increasing cost of the maintenance of hospitals has been a problem that has confronted all hospital managements during the past decade, requiring for its solution the continued and correlated efforts of the best financial minds.

Constantly increasing demands have been made for elaborately equipped x-ray departments and complete scientific laboratories with their accompanying staffs of high salaried technicians. During the past three decades the requirements and standards of nursing service have advanced enormously. The three-year course of education has supplanted the two-year course, and hospital managements no longer employ senior nurses as special nurses a service from which the hospital derived a considerable revenue. Physicians and surgeons are constantly making demands for more scientific and better care of their patients in hospitals. All of this means an increasing cost.

It is evident that the ordinary patient with average financial resources cannot secure the kind of hospital care to which he is entitled if he must bear the financial burden as an individual. Some arrangement must be made whereby this burden can be distributed and paid collectively. Any collective arrangement that might be initiated would undoubtedly be found faulty in many details. Nevertheless, the fundamental principle appears sound.

There has been much talk about communities being overhospitalized. It is true that there are many beds in hospitals throughout the country that are not occupied. But it is just as true that there are as many and more patients requiring hospitalization who have not the financial resources to avail themselves of these unoccupied beds, and these patients are too proud to accept charity.

Let us not talk of overhospitalization or of too many hospital beds. Any plan advocating a reduction of hospital beds means retrogression in the kind of medical, surgical and nursing service to which the sick and injured of any community are entitled. Rather, let us think and talk in terms of meeting the exigencies of the present financial sit-

uation in some more intelligent and progressive manner.

Some years ago there was a trend in some states toward the building of county and community hospitals of which the maintenance cost was partly shared by the taxpayer. This plan did not prove entirely satisfactory, and many such institutions became political footballs, degenerating into hospitals that were not adequately equipped or staffed. Under present economic conditions, any thought of increasing the tax burden of the people would be preposterous.

The abuse of the privileges of the Veterans Bureau hospitals is becoming so well recognized that further comment is unnecessary. The services rendered in these hospitals should be limited to diseases and injuries resulting from war service and to the dependents of those who made the supreme sacrifice. No energy or money should be spared to provide such patients with adequate care. But the obligation of the government should be limited to that group.

A certain hospital of eighty beds which had been running in the red has been successful in effecting an arrangement that has for the time being, at least, mitigated its economic problem. The hospital had assets of \$450,000, and its total indebtedness was only \$18,000. No more money could be secured immediately. Substantial cuts had been made in all salaries and other expenses.

The entire staff, including nurses and technicians, was called together and the financial position of the hospital stated frankly. The workers were told that any available cash would have to be used first of all to pay bills promptly so that the confidence of the community could be maintained. It was then explained that the balance of the collected cash would be prorated to them with no definite assurance of how much that might be. Furthermore, it was pointed out that this arrangement might be the only solution for keeping the hospital open, that if they accepted this plan they would have a roof over their heads and something to eat this winter and a job when conditions changed. Not one of the staff resigned, and the cheerfulness and loyalty with which they accepted the plan were beyond the expectations of the governing board. It is interesting to note that the esprit de corps of this institution is finer today than ever before. Up to date all salaries have been paid.

Similar plans have been devised and executed in other hospitals. Although such procedures may be merely temporizing, they show that great as the difficulties of the hospitals may be, they are not insurmountable.



# Problems Our Hospitals Must Face

By E. MURIEL ANSCOMBE

Superintendent, Jewish Hospital, St. Louis

**L**OWERED occupancy as a hospital problem, quite independent of its relation to depleted income, has many ramifications. Many and varied patients are essential for good clinical teaching of both interns and student nurses. It is impossible for staff doctors to sustain interest in a service that does not provide a stimulus and opportunity for scientific investigation. Lowered occupancy and depleted income form a vicious circle that jeopardizes scientific research, which cannot be carried on without funds. When interest in scientific research wanes, a hospital is reduced to a species of hotel or a home for chronic and convalescent patients.

## *Reasons for Lowered Hospital Occupancy*

In seeking a remedy for any economic or social evil, it is necessary to reason from cause to effect. What is responsible for the lowered hospital occupancy? Rufus Rorem's survey showed a 65 per cent occupancy in all general hospitals throughout the United States during the past year. This did not include mental hospitals which showed a substantial increase in occupancy. Health at a time like this is perhaps the last thing to be considered. Those who formerly had health examinations as a matter of routine are dispensing with them in order to curtail expenses. Patients with ordinary illnesses who formerly were taken care of in hospitals now remain at home. Most pay patients who enter the hospitals today are driven to do so by dire necessity. Physicians believe, however, that a survey of institutions today would reveal an increased death rate, as patients suffering from acute diseases and others where surgery has been indicated jeopardize their recovery by delay in seeking medical aid and in entering the hospital. On the other hand, necessity has curbed overeating and overdrinking, which have a direct bearing on community health, and this aspect of the depression may prove to be a blessing in disguise. Another reason for lowered occupancy is that some parts of the country are over-hospitalized, because no community survey was made to determine the need for additional beds. This mistake cannot be emphasized too strongly or condemned too severely.

Still another factor contributing to lowered occupancy is the practice of admitting private

patients to city hospitals. Is it fair to the non-tax-supported hospitals that are doing far more than their share of free work to deprive them of the patronage of patients who can afford to pay? Surveys have revealed that in some of our largest cities, such as Chicago, the non-tax-supported hospitals are carrying the burden of from 30 to 40 per cent of the city's free patients. Unless some provision is made by the state, county and city authorities for the care of these patients, the hospitals that do not have access to funds raised by taxes may be forced to refuse to admit free patients, which would be regrettable as county and city institutions as a whole throughout the United States are dominated to an alarming extent by politics and the patients do not receive there the best medical attention.

In Pennsylvania a uniform rate of \$3 a day is paid to private institutions for the care of the indigent sick. This aids the private hospital materially in meeting overhead expenses and relieves the state of the financial burden of additional hospitals, the operation of which is costly. This plan enables private hospitals to give a higher type of service and at the same time relieves private philanthropy of this particular drain.

## *Broadening the Private Hospital's Scope*

It has been suggested that private hospitals make provision for the care of tuberculous and psychopathic patients and those suffering from communicable diseases, who have long been woefully neglected throughout the country. I believe this would be a splendid plan, as it would give these patients a better type of care than they ordinarily receive, and would greatly enrich the teaching program for interns and nurses. General hospitals, with little readjustment, could be equipped to care for tuberculous patients, though the public would first have to be educated and convinced that this was a safe procedure. Hospitals of the pavilion type may be more successfully converted to care for such patients, as the fear of contracting the disease by contact would be eliminated. A pavilion could also be set aside for the care of patients suffering from communicable diseases, if the hospital were built on the pavilion plan, without fear of alarming the public.

The remodeling of a general hospital for the

care of psychopathic patients would necessitate the installation of continuous baths, quiet rooms, reenforced windows, which would entail the expenditure of a considerable sum of money. But would this be a wise procedure? The greatest need for hospital care for psychopathic patients is among the free patients who are in reality the wards of the state. If non-tax-supported hospitals provided for the care of these patients, they would again be relieving the state of its responsibility and increasing their own deficits.

*"Per Capita Cost"—A Misleading Term*

Group insurance is also being offered as a partial solution of the hospital's financial problem. This plan has worked successfully in the eastern part of Canada and is being tried in Texas and elsewhere, I understand, with gratifying results. Although I have not had any actual experience with group insurance, it seems a feasible plan and I believe it would provide protection for the individual and prove satisfactory to the physicians. Group insurance can also be purchased by a number of hospitals working in conjunction on the project. A problem, however, would be created by a hospital having a closed or a semiclosed staff, unless an exception were made that would permit the physician to care for this particular type of patient.

With the depletion of funds from every source—private philanthropy, community funds and income from patients—all hospital departments have to be carefully scrutinized in order to be sure that they are returning full value for all the money expended, and the accounting department reflects the whole business situation. Although many elements enter into hospital efficiency, it is exceedingly difficult to compare the financial reports of one hospital with those of other hospitals because terms and accounting methods vary.

Boards of trustees and others interested in hospital administrative costs are prone to make the per capita cost the standard by which to evaluate the efficiency of a hospital administrator. Per capita cost is a misleading term and it may give an entirely erroneous conception of facts. Consider the per capita costs of three hospitals, each administered by a supposedly competent superintendent. The per capita cost in Hospital No. 1 was \$4.60; in No. 2, \$5.82 and in No. 3, \$6.48. The administrator of Hospital No. 1 was pleased with his low per capita cost and perhaps was lauded by his board for his careful and judicious expenditures. However, his \$4.60 figure did not include any scientific work or the salaries of some of the most highly paid officials in the hospital, such as the heads of the x-ray, pathology, bio-

chemistry, electrocardiograph and basal metabolism departments.

The administrator of Hospital No. 2, with a per capita cost of \$5.82, who felt that he was perhaps giving the public a higher type of service at a conservative cost, had included the entire maintenance and salaries of the x-ray, pathology, special research, electrocardiograph and basal metabolism departments, as well as the cost of resident and junior interns. Thus he had more nearly approximated the value of the hospital's service to the community.

The administrator of Hospital No. 3, with a per capita cost of \$6.48, interpreted his cost in terms of service only and felt gratified that the hospital was in a position to do so much for its patients. But he did not have a research department, had only a part-time roentgenologist, a part-time pathologist, had no salaried residents and only a junior intern staff.

Would it not be feasible for the American Hospital Association to check hospital administrative methods by means of an annual questionnaire, similar to the one sent out by the American College of Surgeons, as a check on professional standards? This would encourage the adoption of more businesslike methods and no doubt would reveal to the hospitals extravagance and waste of which they are wholly unaware. Does not this lack of business acumen reflect the inadequate preparation of many hospital executives? This charge has been brought before us rather forcefully during the recent business depression, when in some instances hospital superintendents have been summarily dismissed and their responsibilities taken over by a board member.

*Hospital Industry Has Been Overexpanded*

Articles and editorials that have appeared recently in different professional magazines indicate the need of specific preparation for this administrative field. Should not some provision be made in the near future for an educational program and registration of hospital superintendents, which will make it incumbent upon a hospital to employ a properly prepared superintendent if they wish to obtain institutional membership in the American Hospital Association?

Great advances have been made during the past few years by medical science and our hospitals have grown and developed correspondingly. Although medical colleges have graduated 50 per cent more students than the average loss of physicians by death in the past ten years, there are still not enough, according to statistics, to fill the vacancies in approved hospitals that offer intern training. But the hospital industry has been



overexpanded, like all other industries, during the past few years. The American College of Surgeons and the American Medical Association have created a desire for more qualified interns and the hospitals are constantly raising their standards to meet the demands.

Medical educators have been engrossed in making changes in the curriculum to meet the broader educational problems of preventive medicine, and hospital administrators should feel their responsibility in the development of the intern. A problem that we confront in relation to young medical graduates is their lack of knowledge of the social aspect of disease and their failure to realize the part they must play in this complicated organization of modern society. In numbers of medical colleges public health is taught by men who have had little practical knowledge of public health problems, and the preventive aspects which should permeate their entire medical training are neglected.

#### *Intern Training Is Important*

In an attempt to learn the extent to which hospitals were utilizing their clinics for the furtherance of medical education and the study of the social aspects of disease, I sent out 100 questionnaires to outstanding hospitals with clinics and dispensaries in twenty-four states. Of this number, 68 per cent were making use of their clinics for this purpose. However, it was interesting to note that only 26 per cent of the hospitals incorporated their medical social history with the chart when the patient was admitted to the hospital. Is this not defeating the very purpose for which our medical social history and our social service departments were originated?

The American College of Surgeons and the American Medical Association have outlined courses for interns entering hospitals but unless careful supervision and follow-up work is done, the intern will fail to get out of his training the best the hospital has to offer.

The largest hospital does not always offer the best training, which depends largely on the organization and on the research spirit and the interest of staff members in the intern group. Perhaps there is nothing more distasteful to those of us who are not connected with university medical schools than to hear the words "teaching hospital" connected with university hospitals only. The so-called nonteaching hospitals should not accept interns if they do not have teaching material to offer. However, it should be recognized that hospital administrators of so-called nonteaching hospitals have a greater responsibility in the teaching of interns than administrators connected with the

university hospitals. The physicians responsible for the training of interns in university hospitals are paid professors in the university, while physicians in other hospitals are not paid to train interns and cannot be held responsible for their education. However, there are many who are exceedingly conscientious in their efforts to develop the young graduate. Interns wish greater liberty in caring for patients but if more conscientious teaching were done by staff members, there would perhaps be less complaining by interns.

Unfortunately some physicians are on the staffs of two or three hospitals and their interest and time are so divided between the various institutions that they cannot do justice to any one of them or to the interns. They are primarily interested in the benefits to be derived and not in the service to be rendered. Would not boards of trustees take a step in the right direction if they would appoint to their active staffs only physicians who have no other hospital affiliation? This would stimulate a sense of ownership and personal responsibility, and with their patients concentrated in one hospital such physicians could devote more time to planning and carrying out an intensive teaching program. They could establish more regular routine ward rounds, give closer supervision to the patients' histories and have more time for research work. This would redound to the credit of both physicians and hospitals and would bring hospitals up to a higher standard of efficiency.

#### *The Time Is Ripe for Definite Action*

If an intern takes but one year of training, he must be prepared to cope with the problems that will confront him. He may order daily for his patients many different types of nursing treatments and all sorts of diets required for metabolic conditions, but, when he is confronted with this in private practice, he has no nurse at his elbow to carry out the procedure and may be required to instruct a member of the family. Nor has he a trained dietitian to weigh and prepare the food for his patient. A few lectures in nursing procedures would be invaluable to him and some instruction by a dietitian in the quantity of food that represents a certain caloric value would no doubt save him much embarrassment.

For the past few years articles pertaining to the nursing situation have occupied a conspicuous place in almost every professional magazine and the subject has been discussed from every angle at state and national conventions—nursing, medical and hospital. The survey of the Committee on the Grading of Nursing Schools revealed a glaring lack of educational facilities, an exploitation of student nurses and a great overproduction of



nurses, and the tragic problem of unemployed graduates has resulted. Is not the time ripe for some definite action? I do not believe that the problem will be solved by merely making an appeal for the discontinuance of nursing schools, the reduction of students admitted annually and their replacement with graduate nurses. Schools that are striving to measure up to higher educational standards should be preserved. Might not the National League of Nursing Education assume the responsibility of preparing a new standard curriculum through a national board or commission on nursing education for the purpose of determining the fitness of a nursing school to continue as an educational institution? Such a plan would result in sounder educational methods.

As long as state boards of nurse examiners are appointed by the governors, politics will enter into that selection. The boards consequently will represent a motley array of intelligence, professional preparation and actual experience in the work they are expected to evaluate. I say this with no unkindly feeling towards any board of examiners but to emphasize the lack of uniformity in our methods and results. The adoption of uniform standards by a national board or commission, working in conjunction with the National League of Nursing Education, would automatically eliminate many schools and would result in a marked decrease in the number of students admitted to nursing schools. High schools and colleges would be provided with a list of schools recognized by the national board or commission, and a student entering a school would naturally select one recognized by this board. This, I believe, would do much to control the situation.

#### *Motor Accidents Costly for Hospitals*

Hospital administrators, who to a certain extent are custodians of public funds, should make every effort to be worthy of that trust. Legislation is an effective weapon and every professional group within the hospital has a common cause and should present a united front in an effort to secure constructive legislation that will protect the hospitals from unscrupulous individuals who deliberately and knowingly defraud them.

Another source of loss to hospitals is represented by motor accidents, which cost hospitals approximately five or six million dollars annually. All victims injured in motor accidents pass through the hospital, as the first thought of anyone who witnesses such an accident is to rush the patient to a hospital where he receives every consideration—and rightly so. A damage suit may ensue in which hospital records are produced and busy employees subpoenaed, or perhaps a settlement may be ar-

ranged without litigation. But in how many cases is the hospital reimbursed for services rendered? It seems strange that, when an individual is in danger of capital punishment or life imprisonment, enough money can be secured through friends to provide a lawyer but, when medical and hospital services save life or prevent lifelong invalidism, comparable to imprisonment, there is not the same concerted effort on the part of friends to reimburse the hospital.

Administrators who are responsible for the expenditure of public funds should make every effort, in cooperation with automobile associations, to protect themselves from this loss of money.

#### *Must Redouble Efforts for Legislation*

In some instances when the combined skill of physicians and nurses and the use of expensive laboratory equipment have failed to save a life, no payment is made to the hospital, but within two or three days and in some instances within twenty-four hours, an insurance policy is presented to the hospital for necessary data, in order to safeguard an undertaker. Is not the hospital entitled to the same legal protection that is given an undertaker?

A lien law has been presented by a number of state hospital associations to state legislatures, and one has been adopted by New Jersey during the past year. We must redouble our efforts in the hope that we may follow New Jersey's example during the coming year.

The Workmen's Compensation Law is inadequate in many states. The Veterans' Bill is still staring us in the face and needs our united support. Although we should feel somewhat consoled that Congress has not passed a bill for increasing federal hospital construction, since forty-one bills have been introduced in furtherance of construction, we must not sit idly by. Pressure must be brought to bear from every available source until those responsible for making the laws will safeguard the private hospitals' just earnings, save the government millions of dollars and still give war veterans the best medical care science has to offer.

The hospital problems to which I have referred are not the responsibility of the hospital alone but of the public as well. Articles that have appeared in magazines written by those who have no actual experience and knowledge of hospital work have created false impressions and have done hospitals irreparable wrong. Since the work done in hospitals affects the public as a whole, as it cures illness and prevents illness and educates professional groups, every effort should be made to overcome such unjust criticism.<sup>1</sup>

<sup>1</sup>Read at the hospital standardization conference of the American College of Surgeons, St. Louis.

# An Oxygen Room That Accommodates Four Patients

By A. E. DAVIDSON

New York City

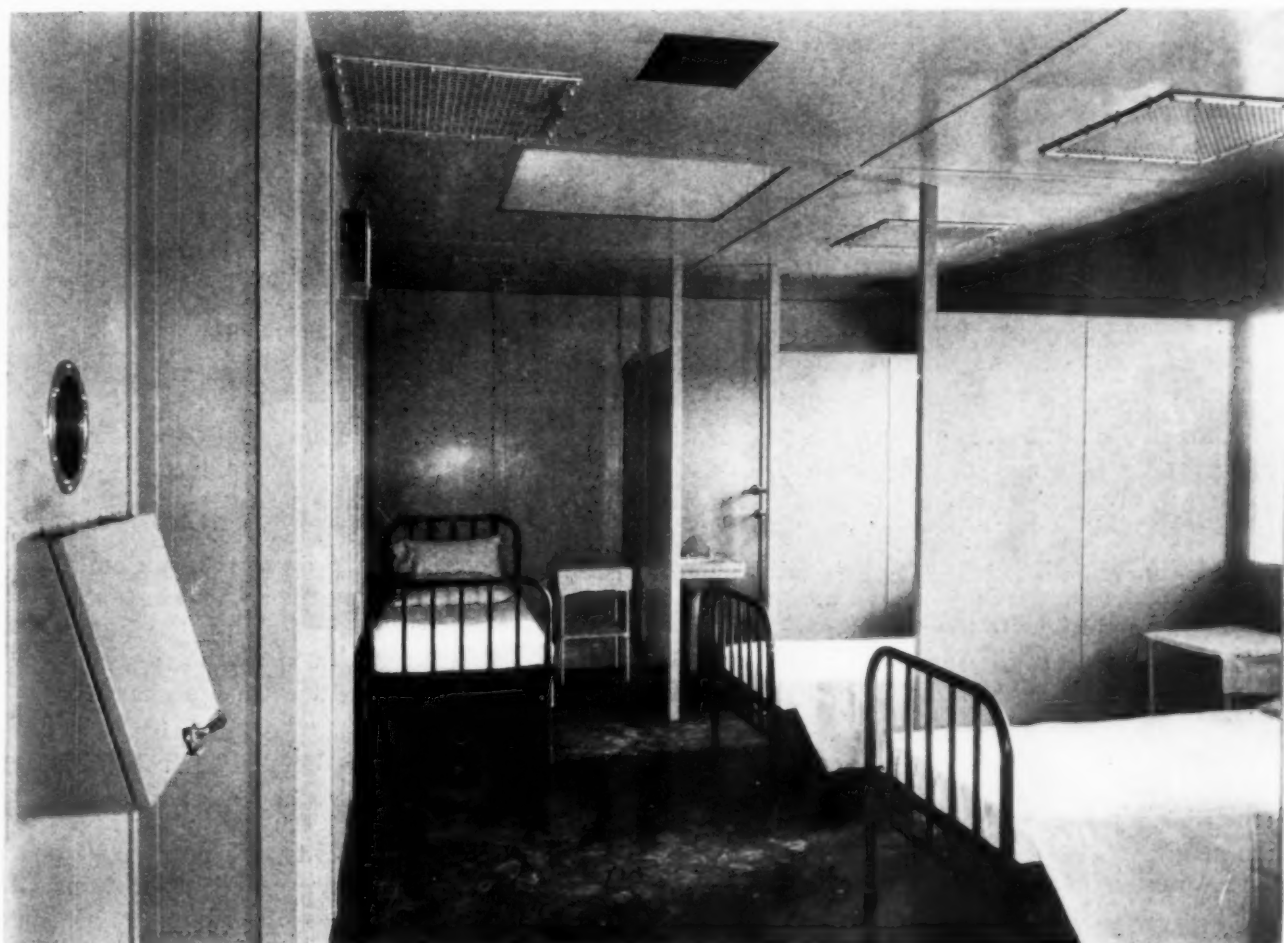
THE progressive hospital is looking forward to a future activity in research and clinical treatment that will tax its present accommodations. With this in mind boards of trustees are making whatever plans are feasible for the inclusion of the most up-to-date equipment and facilities in their institutions.

An example of this progressiveness is found in the recently completed Reception Hospital, Marlboro, N. J. One of the several modern developments incorporated in this hospital is an oxygen therapy unit which can be used to treat four patients at one time. This permanent oxygen cham-

ber provides an installation for oxygen therapy which gives accurate control of every necessary factor, including a supply of sufficient oxygen to the patient, a correct regulation of the temperature for the most effective treatment and the elimination of excess humidity, excess carbon dioxide and objectionable odors.

The oxygen therapy unit is on the same floor as the x-ray suite and the operating rooms. Consequently, it will probably be utilized as an adjunct to the surgical service and for postoperative oxygen therapy.

It is proposed to use this unit for the treatment



*This view shows three bed cubicles and the utility room in the background. The food, entry and communication ports are in the foreground. The outlet grilles are on the ceiling over each bed, and the inlet grille is shown at the left.*

of patients with pneumonia, heart disease, asthma, hay fever and other ailments in which oxygen or a controlled atmosphere is considered beneficial.

Considerable research is contemplated to determine other diseases that will respond to oxygen therapy. The treatment of mental patients with



*Nurse inserting a food tray in the air lock. The small port above is for intercommunication and passage of small articles.*

high oxygen has been suggested as one of the research projects.

Although the hospital is primarily a state institution for the mentally ill, it is proposed to open the oxygen chamber to outside patients from the vicinity of the hospital, the only provision being that they will bear the cost of the oxygen used. This will make the oxygen chamber an asset to the community as well as to the state.

The space allotted for the oxygen therapy unit was 26 feet by 16 feet. To facilitate the operation of the room, it was decided to provide an observation corridor for visitors and for the convenience of the nursing staff. Thus the actual room as constructed is 23 feet, 4 inches, by 13 feet, 6 inches. The ceiling height is 8 feet, 6 inches. The floor space gives ample room for four beds, each of which is in a cubicle that is separated from the other patients in the chamber by metal partitions. Three of the cubicles are on the long side of the room and the fourth is on the shorter dimension.

Each cubicle contains one bed and a bedside table.

The room has double walls constructed of sheet steel panels two inches apart, the space between being filled with asbestos paper for sound absorption, and cork for insulation. The ceiling is of a heavier steel and is insulated with three inches of mineral cork. The doors are double rabbeted and there is an air-tight entry port for the nurse and an air-tight food tray port to eliminate loss of oxygen through the opening and closing of doors.

#### *Special Entry Ports Save Oxygen*

The air lock for entering the room consists of a double door with an intervening space large enough for one person to stand in. The outer door is opened and the nurse steps into the air lock; the outer door is then closed and the inner door is opened to permit the nurse to enter the chamber.

Patients can be brought in through the air lock, or if necessary a stretcher or a bed can be wheeled in through a special large door installed for this purpose. This is seldom used except when the room is first being started, since the oxygen loss would be considerable. The food port is a double door similar to that used for the entrance of nurses and doctors. It is large enough to hold a standard tray. There is a smaller port over the food entry port so that a nurse inside the room can talk to a nurse in the outer corridor. The small port is also used for the passing of small articles.

All parts of the oxygen chamber are visible to attendants or visitors from the observation corridor. The window glass is of a special composition which permits the passage of the ultraviolet rays. The wing containing the oxygen therapy unit has a southern exposure and it is thus possible to use heliotherapy on patients who are in need of it. Each cubicle has its own window.

Two of the metal partitions between the cubicles form a small corner compartment, about 4½ feet by 6 feet, which is used as a utility room. This room is equipped with a bedpan washer, a washbasin, a linen closet and an instrument and medicine cabinet. Providing all this equipment inside the room reduces to a minimum the number of times it is necessary to open the doors or the ports in attending to patients, thus economizing in oxygen.

Every precaution is taken to ensure constant observance of the safety rules. The attendants and the doctors have been cautioned as to the necessity of keeping lights, fire and sparks away from the oxygen chamber, and precautions are taken to prevent patients or visitors from bringing inflammable material near the chamber. Provision has been made for every possible safeguard in the design and construction of the room.



Proper control of the humidity provides adequate protection from static spark. A quartz bulb sprinkler head, set to release a water spray at 140° F., is installed over each bed. All of the lighting fixtures are outside of the chamber.

There are two large panes of frosted glass in the ceiling, and directly over each of these, outside of the chamber, is an electric light. This gives bright illumination to the entire chamber. There are also three small panes of amber-colored glass which are similarly equipped for soft night lighting.

The nurses' signal is given by means of a pull cord which runs through a gas-tight sleeve and operates the signal outside the room. The indicator is so arranged that through a system of mirrors, the nurse in the operating station can see the visible drop which indicates from which bed the signal was given. Thus there are no electrical connections within the room.

With these facilities at the command of the attendants there is no necessity for the nurse to leave the room at any time. This saves considerable loss of oxygen, which opening and shutting of the doors would entail.

#### *Room Contains Minimum of Equipment*

The walls of the room are a neutral gray-green baked enamel finish with a soft luster. The size of the room and the many windows eliminate any sense of enclosure. In addition to this, for the psychologic effect, the equipment in the room has been reduced to a minimum so that the patients will not be confronted with pipes and instruments.

The only pieces of regulating equipment in the room are the thermometers and the elements for the psychrometer; these, however, are neatly boxed in an inconspicuous place on the wall near the ceiling. The room is entirely soundproof.

The general principles and practices used in the construction and operation of oxygen rooms, and the two basic methods of circulating the oxygen enriched atmosphere to these rooms and of conditioning the air so as to be most suitable for the treatment and comfort of the patient were thoroughly considered.

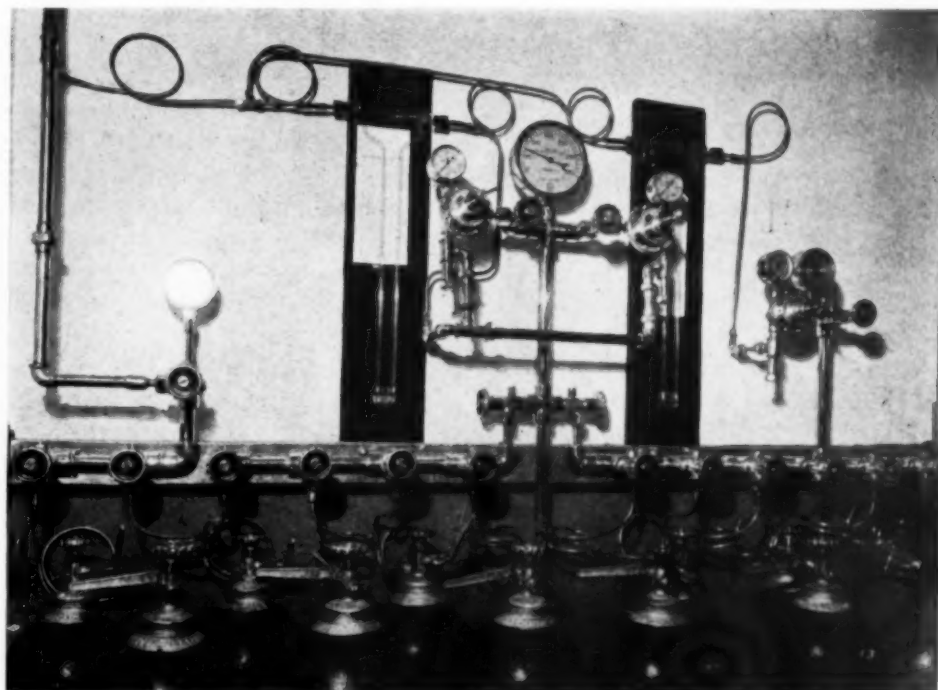
#### *Forced Circulation System Used*

One of these methods is the motor driven or forced circulation system in which the oxygen enriched atmosphere is circulated by means of a blower. The other is the thermo-syphon system, in which by means of brine and steam coils properly placed, the air motion in the room is effected through natural circulation.

The motor driven type of air circulation system was selected as it was felt that this system is more positive in its operation. The motion necessary in the enclosed atmosphere is controlled by a special motor that operates quietly.

The outlet connections in the oxygen circulation system are over each bed in the chamber, behind a large grille. The air is drawn from the chamber by the blower and passes through a duct to the control room. In moving through the duct the air passes over refrigerating coils where it is dehumidified and cooled and then over steam coils where it is heated to the required temperature.

*The oxygen manifold and regulating equipment. This provides one manifold for two oxygen cylinders for quickly increasing the oxygen percentage in the chamber, and two manifolds for connecting eight oxygen cylinders for constant service to the chamber. The two cylinders at the right contain carbon dioxide for use when this gas is desired. Constant checks are provided for all flows.*



The air then passes through the blower to the re-oxygenating compartment where additional oxygen is added to bring it up to the prescribed concentration. The air is then passed through a dust filter, after which it is ready for the chamber.

Since the hospital has no central refrigerating system it was necessary to install a special cooling plant and brine coils for the temperature regulation. In hospitals where the necessary cold brine is available the installation of refrigerating equipment would not be necessary.

Refrigeration is supplied by three mechanical units which, operating only a part of the day,



*The central control station with the instruments for regulating and recording the temperature, the humidity and the oxygen and carbon dioxide concentrations.*

accumulate sufficient refrigeration in a 400-gallon brine tank to operate the chamber for the entire twenty-four hours.

Arrangements have been made so that excess carbon dioxide can be removed from the chamber atmosphere by means of a specially designed decarbonizer unit. If the periodic test made of the chamber atmosphere indicates there is an excess of carbon dioxide, the air is passed through the decarbonizer in which a spray of caustic soda solution (25 per cent) removes the carbon dioxide. This method of removing carbon dioxide is effective and inexpensive.

The oxygen manifold and regulating apparatus, the analyzing and control boards, the refrigerating equipment and the decarbonizing unit are in a small, adjoining room outside of the chamber.

The oxygen supply is provided by a manifold on which twelve 220-cubic foot oxygen cylinders can be used. The oxygen is metered through flow gauges which record the number of liters per minute that are being supplied to the unit. This makes it possible to control leakage within close limits and to prevent inefficient operation through the constant opening and closing of doors or through undiscovered leaks.

The first two oxygen cylinders on the manifold system are for purging or initial charging of the room. They are arranged so that the oxygen can be fed rapidly through a simple needle valve control in order to build up the required concentration quickly. After the required concentration has been reached the main section of the manifold system, consisting of eight cylinders, is arranged to give the oxygen flow necessary to maintain the percentage prescribed by the physician in charge.

Eight main cylinders are controlled by two regulators so that four cylinders or one bank can be used at a time. In addition to the regulators, which indicate the pressure, a Pitot tube is used to record the actual flow in liters per minute. A similar regulating mechanism is used on the last two cylinders which are used for carbon dioxide when this gas is prescribed in addition to oxygen. Initial charging of the room requires between four and five 220-cubic foot oxygen cylinders, but when in operation, 10 liters per minute is sufficient to maintain a concentration of approximately 50 per cent of oxygen when all four beds are occupied.

#### *Chamber Operates Automatically*

The oxygen loss by actual seepage has been tested and found to be less than 1 per cent in twelve hours. This is exceptionally tight for an installation of this sort.

An adjoining room is used for oxygen storage. It is planned to have an adequate supply of oxygen on hand so that when not in operation the room can be started on short notice.

All the control instruments are in the adjoining central control room. To start the chamber, the oxygen is turned on, six electric buttons are pushed, and from then on everything is automatically operated and recorded. The temperature is regulated by the operation of the steam and the brine coils which are automatically controlled within the desired limits by a thermostat and a humidostat on the upper part of the control panel. A constant record of the temperature and humidity is maintained by means of a recording thermometer.

The oxygen supply is kept at the required concentration with the aid of an analyzing recorder which gives a continuous record of the oxygen

and the carbon dioxide concentrations; the oxygen concentration is read in units of 1 per cent, and the carbon dioxide in tenths of 1 per cent. The equipment also includes an improved air analysis apparatus that is especially designed for oxygen chamber service. This instrument is used only occasionally to check the calibration of the recording instruments. A manometer is used to check the levels in the tubes, which offers a safeguard against error in analysis. It is only at rare intervals that expert or engineering supervision is necessary. Under ordinary circumstances a doctor or nurse is assigned to supervise and to operate the room.

While definite figures are not yet available, it appears that the total cost, including oxygen for the operation of the chamber, will be less than \$10

for twenty-four hours. The cost for either one or four patients is about the same.

The installation of an oxygen therapy unit having a capacity of two or more beds is something every modern hospital should consider either when new buildings are to be constructed or even at the present time as an alteration measure in existing buildings. Satisfactory means have been developed for the control of all therapeutic needs and also for the best installation for the patient's comfort. It seems an economical move for hospital boards of trustees to consider seriously the advisability of installing such a unit since not only is it an additional feature which may draw patients to the hospital, but its constant use, which will be assured by low cost through proper installation and efficient operation, will pay ample dividends.

## A Laundry System That Has Proved Successful

Efficient, economical service has resulted from the adoption by St. Vincent's Hospital, New York City, of the direct exchange system between the sickroom and the laundry through a central linen room which controls both units, according to Sister M. Felicite, superintendent. She described the operation of the system as follows at the seventeenth annual convention of the Catholic Hospital Association:

A stock of linen and clothing should be supplied to each floor when the system is first put into operation. The basis for this standard supply is two and one-half times the amount of linen and clothing allowed to each bed. This standard supply should be kept on hand in the ward or private pavilion at all times.

An employee from the laundry department starts at 7:30 a.m. with a noiseless truck to collect the soiled linen in the private pavilion. He brings the soiled linen to the laundry corridor where it is assorted and counted in the presence of the laundry department supervisor. As the count for each hall is completed, a laundry slip with this count is handed to the forewoman in charge of the clean linen room, which is adjacent to the laundry. She immediately starts to fill the truck from the supply on the shelves. By the time the employee collecting the soiled linen has finished his rounds, the clean linen is ready to be substituted for what has been removed. The same collector distributes the fresh linen, and presents the slip with the count to be verified by the Sister in charge of each hall. By 10:30 a.m. all the linen belonging to the private pavilion has been returned. The return of linen to the ward building is completed by 2 p.m. The operating room linen is brought to and from the laundry by a porter employed in the operating room in order to avoid infection.

Under the direct exchange system it is necessary for the laundry to maintain a repair room. The Sister in charge of the laundry inspects the articles to determine whether or not they can be repaired. If they can be mended, they are sent to the repair room in the laundry; if not, they are condemned. The condemned articles are listed, and they are sent to the central linen room every

two weeks, whence all new articles are supplied. The operating rooms are the only departments supplied directly from the central linen room with new linen, as the operating division does its own condemning and repairing.

The central linen room is on the first floor of the hospital. The personnel consists of a Sister supervisor, three seamstresses and an occasional volunteer worker. All new linen is marked with a marking machine and placed on separate units of steel shelving for the routine exchange. The ward linen is identified from the private pavilion linen by a different marking arrangement. Periodic inventories are taken on each floor by the Sister in charge of the central linen room. This gives a positive check on where losses occur. Any shortage is replaced directly from the central linen room.

## Pitfalls of Slashed Budgets

"What is the relation between the superintendent and the board of trustees?" asks Dr. R. A. Seymour, superintendent, Saskatoon City Hospital, Saskatoon, Sask., at the meeting of the Saskatchewan Hospital Association. He then answers by saying:

"He is the chief executive officer to carry out the policies laid down by the trustees. He is not responsible for these policies, though his counsel is often accepted when such policies are in the making. At times policies are adopted contrary to the opinion of the superintendent and particularly is this true during these difficult financial times when economy measures are put through.

"Sometimes a superintendent is employed by the board to put into effect a régime of economy and is discharged by the same board for failing to keep the hospital modern and up to date. Like a red flag the deficit side of the ledger spurs on those in authority to cut a budget that has been prepared carefully and with special knowledge. In such cases the trustees must accept full responsibility. It is possible to curtail operating expenses by the sacrifice of service and by leaving the path of progress, but the superintendent must beware of such a surrender lest he be caught in the net of criticism that will surely engulf him as a result of such a policy."



# Basic Requirements for Intelligent Nursing

By ALMA E. GAULT

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THE present day needs in nursing education have been expressed in many ways. While the various versions are somewhat in accord, some widely different points of view are expressed. Our approach to the subject is the demands that have been and are being made on the graduate nurse.

The findings of the Committee on the Grading of Nursing Schools, the tremendous oversupply of poorly trained nurses and the large number of capable nurses who are unemployed are familiar facts to all associated with the profession.

It is pretty well agreed that the nurse should be an intelligent woman with a minimum background of a high school education. There has been no clear definition of "intelligent" nor is there definite agreement as to the degree needed or the high school rating necessary for the student nurse. Doctors and patients want nurses who come from homes where refinement and culture have given them something not learned in books and which is acquired with difficulty in later life.

## A "Jack-of-All-Trades"

In order to evaluate the professional equipment of the graduate nurse as set forth by persons associated with various fields of nursing, I examined some recent statements. One public health leader wants the graduate nurse to be a teacher of health,<sup>1</sup> another wants her to perfect herself in the fundamentals of mental hygiene, posture and other public health activities of merit.<sup>2</sup> One prominent pediatrician demands that the nurse know what the normal child needs, and that she know how to play. The things a rural public health nurse must be capable of doing range from driving a car, preparing her own publicity and organizing committees, to good nursing technique at all times and a knowledge of normal home and child life.<sup>3</sup>

Recognition of the value of industrial nursing

still waxes and wanes with the recognized value of man power. The industrial nurse needs a medical-mental-social viewpoint as well as ability as a health teacher.<sup>4</sup>

One registrar writes: "I find many of our nurses are poorly prepared for any branch of nursing except private or general duty. I have had to say I could not fill positions, with a waiting list of over a hundred."

## What About the Mental Patient?

Ella Best, field secretary, American Nurses' Association, said in a report on a field study: "The graduate nurse who is interested in the true art of bedside nursing and at the same time is able to do effective cooperative work with other members of the staff is the type of nurse who is being sought for the position of general staff nursing in the hospital." Miss Best also points out in this report that in the hospitals studied only 30 to 33 per cent of the applications on file are acceptable.

The hourly nurse needs the combined virtues, ability and experience of the public health, the private duty and the institutional nurse, according to Augusta M. Condit, in the *American Journal of Nursing*, January, 1930.

In the field of communicable disease nursing there is a demand for greater nursing skill and experience. In tuberculosis and venereal disease nursing there is a lack among nurses of a fundamental knowledge of the diseases and their control. The nursing profession holds an unenviable position with the high tuberculosis rate within its ranks. Again nurses are challenged by a need.

What is the nurse's position going to be regarding the mental patient? With more psychopathic patients than all other medical patients combined, are we to allow Labor to control state hospitals, and thus keep persons in attendance who know little or nothing of the science and art of mental nursing, or are we to supply properly trained personnel from the nursing ranks? Dr. William L. Russell says in *Mental Hygiene* for January, 1932:

<sup>1</sup>Bolt, Richard Arthur, *The Infant Before, During and After Birth*, Am. Jour. of Pub. Health, Aug., 1931.

<sup>2</sup>Willinsky, Charles F., *The Community Program as It Applies to the Child of From One to Six Years*, Am. Jour. of Pub. Health, Aug., 1931.

<sup>3</sup>Havey, I. Malinda, *What Preparation Should the Public Health Nurse Have for Rural Work?* Am. Jour. of Pub. Health, July, 1930.

<sup>4</sup>Hubbard, El Rene C., *Industrial Nursing Program*, Public Health Nursing, December, 1931.

"It is evident that psychiatry must in the future have a large place in medical practice. Nursing and nursing education must surely follow this lead."

The array of values as set forth by specialists in their respective fields is imposing. Is the nurse then to be equally skilled in pediatrics and rural nursing and to have a medical-mental-social point of view that would enable her to do constructive work in industry? I think not. In my opinion the school of nursing should lay a foundation on which further training and experience may safely be superimposed so that the result is a person thoroughly prepared for the job ahead. But just as surely as a weak foundation is a bad architectural risk, so it is in education in any field. Let us look at the foundations of nursing education. Let us consider these foundations to be laid in the selection of the student, her preparation as a woman and as a professional person. In order to throw further light on the subject it might be well to draw some comparisons with the field of general education.

The preparation of the student who applies to a school of nursing is of prime importance to the school and to the profession. The completion of four years of high school work by the applicant has for so long been the goal of nursing schools that it is frequently forgotten that this standard in itself may not be a safe measuring rod. The wide variety of standards in grading pupils in high schools makes even the selection of students from the higher levels of a class a difficult problem. The opinion among many educators that the girl who is conscientious but not capable of college work is an ideal candidate for the school of nursing makes opinions and suggestions from the teachers themselves of questionable value. Nor is the fact that a prospective student has had some years in college or has a bachelor's degree any proof that her choice of nursing is a wise one.

#### *It Is Difficult to Select Proper Students*

The intelligence quotient is one guide that will help us along the way, provided the test is made by an experienced person. Not all students that have high ratings make good nurses, but they are less likely to make serious errors that endanger the lives of patients than are those who have very low scores.

Grades of intelligence and of work previously done cannot successfully take the place of a personality estimate of the student. The applicant should be required to interview the director of the school, or a graduate of the school if the applicant lives at a distant point. The tendency to categorize the applicant as to whether she is of

the type accepted as making a good nurse is dangerous because it may deprive the profession of minds that will do individual and constructive thinking. With all of its strong and weak points the interview as a uniform method of selection is impractical, and it is hoped that some day there will be personality ratings and aptitude tests to help the student and the school to make a wise choice. Despite all of these safeguards, difficulty will still be encountered in selecting the proper students.

In the desire to mold efficient nurses who will serve the community best there is the danger of forgetting that first of all the nurse is a woman. It is only as her development as a person receives the fullest consideration that she will bring the greatest contribution to the social welfare.

#### *Must Be Taught How to Play*

The well educated woman today needs a scientific background the same as her brother. She is no longer satisfied with a smattering of knowledge based on theories which she has not proved to her own satisfaction. She wants to know. This desire must be stimulated and satisfied if nursing educational institutions are to be developed. Is it fair to demand that the applicant for admission to a nursing school meet college entrance requirements and then after she is accepted give her work that activates neither her thinking nor her imagination? How can a learning attitude of mind be developed in the student unless she is given efficient, ambitious instructors, laboratories in which she may experiment and good libraries in which she may study?

It is not only to the serious business of libraries and laboratories that attention must be given, but also to the play hours. Groups may play successfully without equipment and they may find outside of the school places in which to seek diversion, they may even furnish their own leadership, but any school that is willing to accept such a program acknowledges that it expects no fruit from the activities of the hours that are called recreational. Just as a little child learns many of the valuable lessons of life through play, so do adults. The pediatrician who complained that the nurse was unable to play with the child struck at the heart of this serious weakness. The infectious enthusiasm of group play, the give and take of sport, the loyalty of the team, all give outlets for pent up emotions and tired minds and bodies, which the student nurse needs probably even more than other students.

The pale scholar, the anemic youth or the martyr nurse who is in quest of learning and service are no longer the ideal for an American student

in any walk of life. Nurses who are to carry a large share of responsibility for the health of the community should be taught how to keep healthy. The laity are rightfully shocked at the nurse's lack of knowledge on this subject. Instruction in personal hygiene, including mental hygiene, should be given as soon as the student enters the school. Coupled with this is a need for some scheme whereby each student may be known intimately by some faculty member through contacts made outside of the classroom and the hospital ward. It is frequently discovered in trying to determine the reason for poor work on the part of a student that while she is not ill, neither is she well. The reason for the condition is usually found to be lack of organization in her mode of living, with the resultant lack of proper time for sleep and play, and a disregard for the laws of hygiene and nutrition.

#### *A Little Learning Is Dangerous*

The proper combination of study, experimentation, play, the guidance of efficient teachers and the student's devotion to a ministry of service should provide her with the things that will make her happy.

While the task of providing the means for the education of the student as a young woman is of great importance, the school of nursing has usually considered its job as one of preparing the young woman in certain skills and techniques that would fit her for a special type of work. This special type of education has received most of the time and attention of nursing schools.

Not long ago I watched a nurse who excels in her work care for an excited patient who was worn out with the pain of a fracture that had not yet been reduced. It was one of those situations that will happen in any hospital. The patient had been wheeled into a room and left in a fairly comfortable position to await the doctor who was in the operating room. The patient had been waiting for some time. The nurse approached the patient and with exquisite gentleness, great skill and complete assurance, put the patient at rest and the injured member in the proper position.

In analyzing the incident, I realize that the nurse's assurance and skill were not a result of experience alone but were due largely to her first thorough understanding of anatomy. She knew exactly which muscles could be stretched without pain or danger and which ones needed to be relaxed. She was equally skillful from a psychologic standpoint. The thing that appealed to the patient was the nurse's quick response to her pain and the desire to serve, while the nurse's confidence in her own ability encouraged the patient.

Are we not ready for thoroughness in the teaching of the sciences? Dare we escape the proverb that a little learning is dangerous? It has been said that student nurses more than make up for the lack of hours in the classroom and laboratories by the extra hours spent on the wards, but the teaching value of those duty hours has not been definitely determined.

Courses in bacteriology and chemistry can no doubt be cut, but this should not be done except to make room for some other educational feature that is more valuable to the nurse. Anatomy has been rather easy to manage in the nursing curriculum, because doctors have been willing to assume the teaching obligation. It has been difficult, however, to secure an intimate correlation of the science of anatomy with the practice on the wards. Bacteriology and chemistry are probably easier to apply in practice on the wards, and correlation with these sciences should be an integral part of the teaching of nursing procedures.

The safeguarding of human lives and the consideration for the comfort of the patient have tended to develop stereotyped teaching in nursing procedures and in the care of the patient. We have become dogmatic in our teaching, not wholly because we have been afraid to trust the student's judgment, but also because as teachers we lack confidence in our scientific background. There has been little to prompt the student to use her intelligence or imagination to devise new methods. This has been done although procedures have been developed and changed in order to keep pace with the advance of medical diagnosis and treatment. A knowledge of principles, based on the fundamental sciences plus the development of skill by repetition of the procedure, including adaptations to the various phases of nursing with an esthetic sense of the beauty of a task well done, would encourage the student to bring a learning attitude of mind to even so lowly a task as making a bed.

#### *Standards for Tuberculosis Nursing*

Every private duty and public health nurse should rightfully be doing a case finding job in tuberculosis. There is definite evidence that students are becoming infected with tuberculosis on the wards of the general hospital. Therefore is it not our duty to make specialized surgical nurses of our students? The Illinois League of Nursing Education, through its tuberculosis committee, has drawn up standards for education in tuberculosis nursing which none of us have been able fully to carry out, but which are none too high if this large group of patients is to be cared for and the students taught and protected.



The psychiatrist, the pediatrician and the public health officer say the nurse needs a knowledge of mental disease and mental hygiene nursing. With thousands of undernursed patients in state hospitals and with hundreds of students in need of this type of nursing experience, it would seem that these two needs could be brought together to the mutual advantage of both groups.

#### *Should Understand Social and Economic Problems*

The nursery schools offer opportunities for child study and a study of the psychology of behavior, two subjects that nursing schools have overlooked. The value of such courses is illustrated by the case of a senior student nurse who, after completing a three-months' affiliation with the Merrill Palmer School, completely changed the food habit routine of a ward for tuberculous children. The nurse who cares for children needs to know the fundamentals of child psychology as well as of nutrition and physical growth.

The student nurse should be made familiar with those services that reach out into the community and complete the work begun within the hospital by teaching the patient a more hygienic and more satisfactory way of living.

Since it is the aim in preparing the student to fit her technical and social skills to the needs of the community as well as to broaden her horizon and give her a background of knowledge and understanding, then every service that reaches into the community is of interest to the student nurse. The agencies that contact the homes must be efficient and the student who shares in this work must be carefully taught and supervised. She should arrive at this period of her nursing practice armed with academic information regarding the agencies at work in the community. She should have an understanding of the social and economic problems she is to meet.

The out-patient department is on the threshold between the extramural and the intramural services. This department gives the student experience in the care of patients suffering from illness that does not require hospitalization, in the pre-hospital and posthospital care of the institutionalized patient, in the steps in prenatal care and in health teaching. Proper health teaching by the doctor and the supervising nurse is a big help to the student. Actually doing the teaching herself offers the student, especially the postgraduate, a splendid opportunity to practice the art of nursing. Her work, however, should be carefully supervised, and she should be given definite facts to teach, definite outlines, and suggestions as to what not to teach. Community social service departments and the various health and social agencies

have come so generally to consider teaching a part of their responsibility that practice periods with them are easily arranged. In Cook County Hospital the large number of patients who are ineligible for admission, who need care in some other dispensary or who are directed to the various clinics within the hospital, have created a responsibility too great for the social service department to handle. A teaching supervisor, who is well prepared in public health nursing and in social service administration, with students working under her direction, has made a strong and valuable link both in service to the patient and in teaching the student.

To what extent are the problems of nursing education also problems of general education?

In an article entitled "Educational Confusion," Gordon Hullfish points out that the student substitutes a study for the act of studying.<sup>1</sup> "We deal with bounded subjects each presenting a completed share of the world's knowledge, entirely removing the caffeine from our intellectual drinks. Thus we protect the student from any danger of stimulation." The student's work lacks integration. Teachers pursue their own prescribed subjects without considering their relationship to others.

#### *Give the Patient First Consideration*

Let us look at some of our teaching in this light.

If we teach the principles underlying our procedures, then adapt the procedure to the various types of patients, the adult and the child, the medical and the psychotic patient, we help the student to see that the same procedure with the same scientific principle is merely being adapted to meet the needs of different types of patients. The same lesson might be taught in adapting the procedure to meet the wishes of different physicians.

Do we not talk too much about surgical and obstetrical nursing, medical and communicable disease nursing? It is not the same patient that is suffering from the peptic ulcer whether he is on the medical floor having diet therapy or on the surgical ward in preparation for an operation? The diabetic patient may be found in surgery or in neurology as well as in medicine, and we are familiar with the very high incidence of tuberculosis among mental patients. In other words, can we not more and more think and teach the patient rather than the condition? Sir William Osler once said, "It is much more important to know what sort of a patient has a disease than what sort of

<sup>1</sup>Hullfish, Gordon, Educational Confusion, Ed. Research Bull., Ohio State University, Feb. and March, 1932.

a disease a patient has." Even the case study which we intended to be a tool in hand for this task has tended often to emphasize an outstanding case rather than a patient.

The answer given in the educational field by John Dewey seems to find the integrating force in the social sciences.<sup>1</sup> "The school like the nation," states Mr. Dewey, "is in need of a central purpose which will create new enthusiasm and devotion and which will unify and guide all intellectual plans." Mr. Hullfish says "Under all circumstances the one concern of education should be to preserve the integrity of the individual." Mr. Hullfish is thinking only of the student. In our teaching we are thinking not only of creating a well balanced student, but are aiming to "preserve the integrity of the individual" in the treatment of the patient and in the student's thinking of her patient.

#### *Cook County's System*

Katherine Tucker, director, National Organization for Public Health Nursing, suggests sending the student into the home as an observer in the early part of her training in order to help her to think of the patient as a person and as part of a family.

A course in the introduction to public health nursing which is given at the end of the first year coincident with the sciences of psychology, sociology and economics, and a course in the introduction to social service work are given by me at

<sup>1</sup>Dewey, John, *Some Aspects of Modern Education*, School and Society, October 31, 1931.

Cook County School of Nursing. An attempt is made to awaken in the student an interest in the agencies and forces that are serving the patients outside the institution. For example, the student learns of the maternal and infant mortality problems, their scope and the agencies at work to correct them. She visits an infant welfare conference where she may observe the mothers and the children, and the doctor and the nurse at work. She is told of the program and the relationship of this particular organization to other organizations. Later the student has her pediatric experience, when she studies the sick infant and the feeding case, and learns that every infant is considered the responsibility of the hospital until the mother makes contact with a private physician, a dispensary, the health department or the infant welfare society.

It is almost as difficult to find teachers as it is to find nurses who understand the normal and the slightly abnormal child, and who know what constitutes normal growth and development, both physically and mentally.

The great need today is to divorce the financial responsibility for the school of nursing from the care of the patient. I am not unmindful of the fact that the curriculum suggested in this paper is an expensive one, nor am I forgetting that we must face shrinking investments and depleted budgets, but is this the time to go on turning out more and more poorly prepared graduates when scores of graduates are unable to buy bread and butter?<sup>1</sup>

<sup>1</sup>Read at a meeting of the Michigan State Nurses' Association.

## Is Supervision of Student Nurses Adequate?

"Nursing does not teach through apprenticeship," says Dr. May Ayres Burgess, Ph.D., director, Committee on the Grading of Nursing Schools.

In the schools studied by this committee, comprising 80 per cent of the accredited schools in the country, it was found that students do not work side by side with graduate nurses in anything like the one-to-one relationship of the apprentice system.

In three-fourths of all the schools, the student is required to share her head nurse with at least three other students, and in nearly 20 per cent of the schools, she has to share her head nurse with nine or more fellow students. Moreover, head nurses have many duties in addition to teaching and guiding the students. They are required to handle the entire administration of the ward, to see to it that records are properly kept, that maids are properly trained, that telephones are answered, that visitors are received and that every attention is given to doctors who visit the ward.

Dr. Burgess concludes from her survey that student nurses often have to work without adequate supervision,

because most hospitals do not provide enough graduate workers to make adequate supervision possible.

Both on day and night duty there is an accepted minimum number of graduate nurses, and this number has apparently little relation to the numbers of patients or students, she finds.

#### *Three Questions to Be Answered*

Before the adequacy of student supervision can be judged, Doctor Burgess says that three questions must be answered. They are as follows:

1. Are there enough workers on the ward so that every patient can receive good nursing care and so that every student can practice giving good nursing care, without being conscious of pressure to get work done?

2. Are there enough graduates so that each student can work under close direction of a skilled graduate nurse?

3. Are these graduates good nurses and good teachers? Do they think about the patients, and do they think about the students as they work?

If it were possible to find the answer to those questions, we could begin to measure the quality of education and the quality of nursing service as actually practiced in our schools, Doctor Burgess believes.

# A Hospital Designed to Ensure Its Patients Light and Air

By MARLAY W. LETHLY

Architect, Springfield, Ohio

THE new Springfield City Hospital, Springfield, Ohio, is on a site of approximately nine acres, on one of the main thoroughfares leading from the city. For a hospital, the site is ideal, being permanently assured of quiet and restful surroundings. The building stands well back from the main highway and there are no near-by railroads or street car lines. The business and industrial sections of the city are about two miles distant. The grounds are high, being at the top of a long low hill, overlooking the city on the west and open country in other directions.

It was possible to preserve several large pines and other trees that were on the site and since the completion of the building the grounds have been completely sodded and landscaped, additional trees and shrubs planted and an underground sprinkler system has been installed.

An automobile entrance is on the side street. Except for a turning drive leading to the main entrance, the entire front of the building has a broad vista of lawn. Ample parking space for visitors' cars and a separate parking space for doctors and the hospital personnel are provided well away from any portion of the building occupied by patients. Two double tennis courts near the nurses' home are provided for the

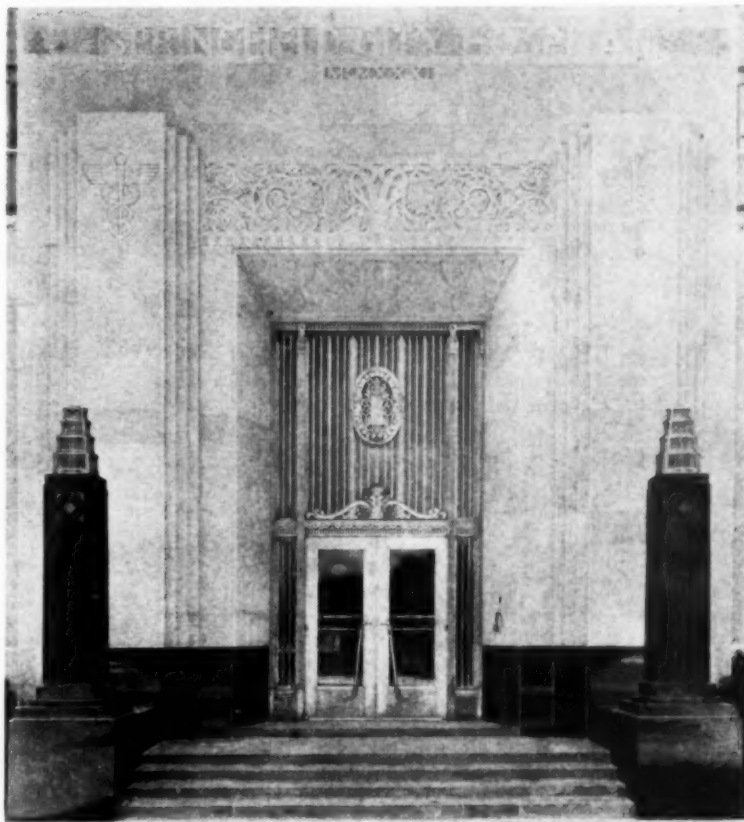
nurses, who derive much enjoyment from them.

The hospital group consists of three buildings—the main building of eleven stories, a five-story nurses' home and a two-story combined power plant and laundry. All are connected by underground tunnels, well ventilated and lighted.

Since the design of the building follows no particular style of architecture, it must come under the category of modernistic. The materials used for the exterior are buff brick in mottled shades and Bedford stone trim. The stone base of the main building extends to the second floor window sill and the entrance wing is entirely of stone. Except for the entrance motif, ornamentation has been used sparingly. The recessed doorway is accentuated by the strong vertical lines of the

stone pilasters and the polished black granite base, steps and light standards. White metal is used for the doors, frames and transoms and also for the light fixtures. The insignia of the medical profession and other symbolical ornaments carved in stone have been used to good advantage and indicate the nature of the building.

The basement is only partially underground, being about six feet below grade at the front and at the same grade as the drive and service court in the rear, where most of the



*The polished black granite base, steps and light standards and the ornamented stone make a beautiful main entrance.*



more important rooms are located. This floor is devoted entirely to storage space, the dietary department, the receiving department and the service rooms.

The dietary department consists of a main kitchen, with refrigeration for meats, vegetables and dairy products, and separate rooms for the bakery, the butcher shop, the preparation of vegetables and a special diet kitchen. There are two serving stations where all trays are set up and sent to the patient floors on high speed, automatically operated dumb-waiters. Each serving station is supplied with set-up tables, tray and silver racks and three dumb-waiters. From the time a tray leaves a serving station it has been found that not more than three minutes elapse until it reaches the patient's bedside. Dishwashing units are located in connection with the serving stations and the main kitchen. Separate dining rooms are provided for student nurses, graduate and special nurses, doctors, the administrative staff, patients' guests, and there are two dining rooms for the help. Cafeteria service is used in the nurses' and unclassified help's dining rooms, but the others have waitress service.

#### *Kitchen Layout Carefully Planned*

The tables, sinks and dishwashing machines throughout the kitchens and serving rooms are of noncorrosive metal, which has also been used extensively in the construction of other fixtures. All of the equipment is of modern and sanitary type. Built-in tile bases are provided for all count-

ers, cabinets and refrigerators. The floors in the kitchen and serving rooms are of red quarry tile and the walls are of white enameled brick. The entire layout has been planned to provide the best food service and the most enduring quality in equipment and material.

On this floor are the office of the dietitian and her assistants, the housekeeper's office, the special nurses' locker room and offices for the purchasing agent and storekeeper, also locker rooms for the help. Ample provision is also made for general supply and kitchen and drug storage.

#### *Main Entrance Is on Central Axis*

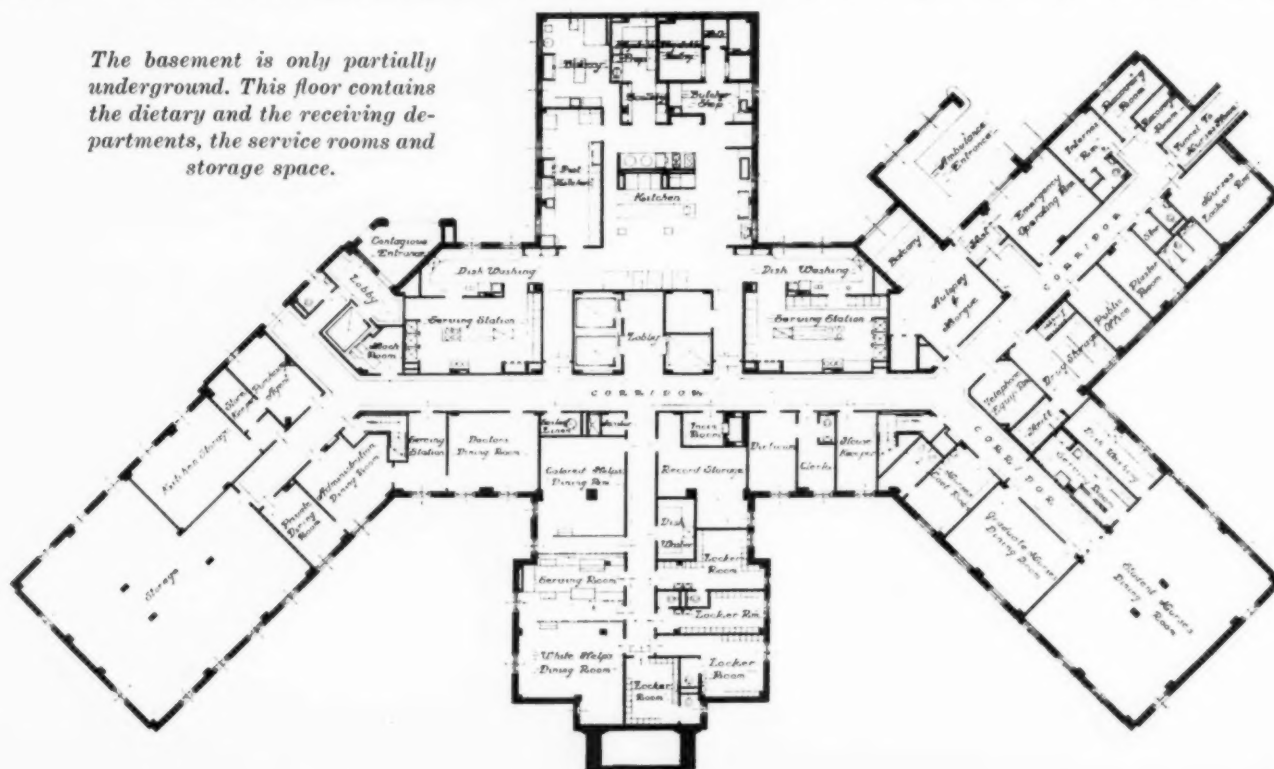
A separate ambulance entrance is provided for patients having contagious diseases. This opens directly into an elevator going to the floor above, where this department is located.

Adjacent to the main ambulance entrance is an emergency receiving room and fracture room. This room is equipped to take care of minor emergency operations. In connection with it are recovery rooms and living quarters for an intern. The morgue and necropsy room, also opening from the ambulance entrance, has a small spectators' gallery and a projection machine for lantern slides. Four refrigerated body boxes are provided.

All floors in the basement, with the exception of the kitchen, are of terrazzo. The walls of the corridors, storerooms and service rooms are of glazed brick.

The main entrance is on the central axis of the building and on a line bisecting the angle of the

*The basement is only partially underground. This floor contains the dietary and the receiving departments, the service rooms and storage space.*





*The broad stairway from the entrance vestibule leads to a large, harmoniously decorated foyer. The waiting room and the administration offices are on either side of the foyer.*

main thoroughfare and the minor side street. From the entrance vestibule a few steps lead to a large foyer, with a waiting room and administrative offices on either side. Ornamental plaster, an extensive use of color and a terrazzo floor worked out in a pattern design are harmoniously combined to make the entrance bright and attractive. The walls of the waiting room are paneled in walnut. The lighting fixtures, radiator grilles and grilles opening into the room clerk's and cashier's offices are specially designed and executed in white metal. The office of the superintendent, and all other rooms open to the general public, are given special architectural treatment.

The entire right wing of the first floor is devoted to out-patients and free clinical work. Here are the various examination and treatment rooms, the social service rooms and the pharmacy. The out-patient waiting room is equipped with substantial fixed seats and will accommodate about sixty persons. A separate entrance was provided so that out-patients need not pass through the main portion of the building.

The laboratory is planned to meet the require-

ments of a general hospital and is complete in every respect. An animal room in connection with this department is provided in the power house.

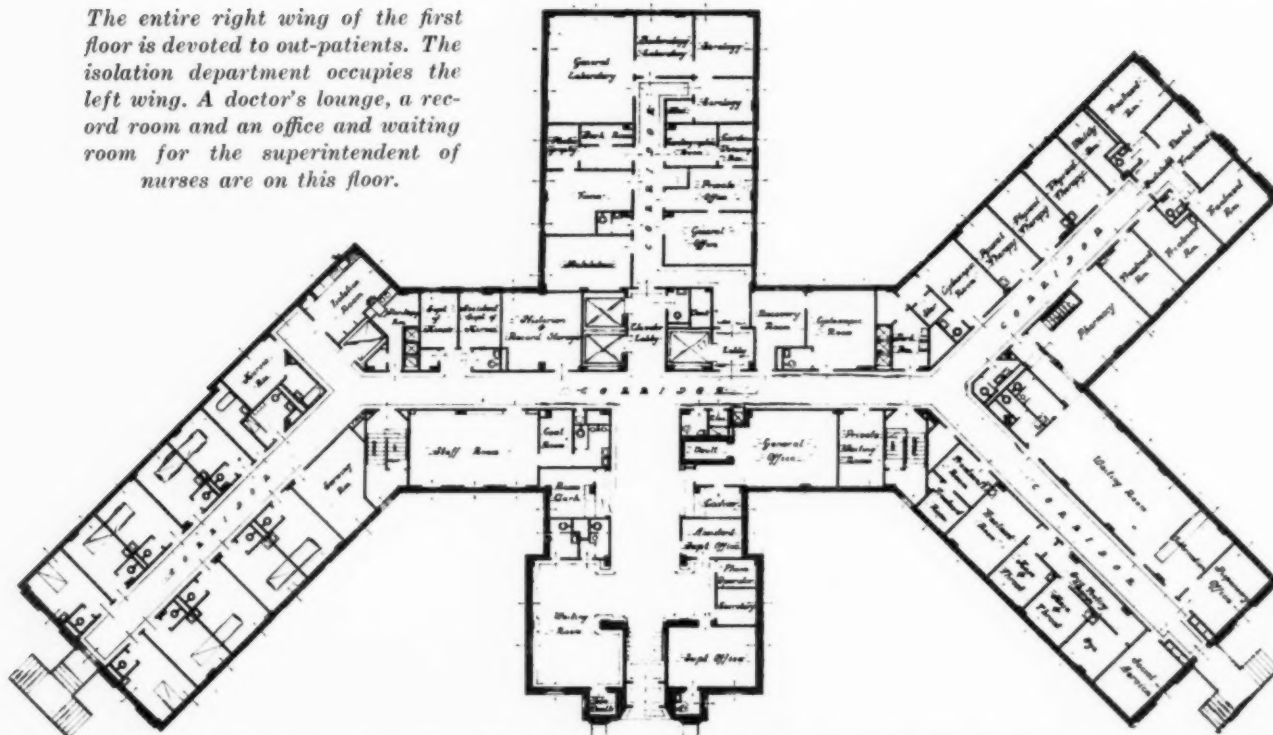
A doctors' lounge, a record room and an office and waiting room for the superintendent of nurses are provided on this floor. The doctors' lounge is attractively furnished and is used as a library. The walls are paneled in walnut, with built-in cases for books.

#### *Isolation Department Is Complete Unit*

An isolation department containing ten private rooms occupies the left wing of the first floor. It is a complete unit within itself, having all necessary utility rooms, a nurses' station and, as previously noted, a separate ambulance entrance and elevator from the basement.

The second floor is occupied by the maternity department and is one of the outstanding floors in the hospital. It is designed so that the various classes of patients may be isolated. There are separate nurseries for the white and colored babies and also an isolation nursery. Provisions are made to accommodate a total of about fifty-five

*The entire right wing of the first floor is devoted to out-patients. The isolation department occupies the left wing. A doctor's lounge, a record room and an office and waiting room for the superintendent of nurses are on this floor.*

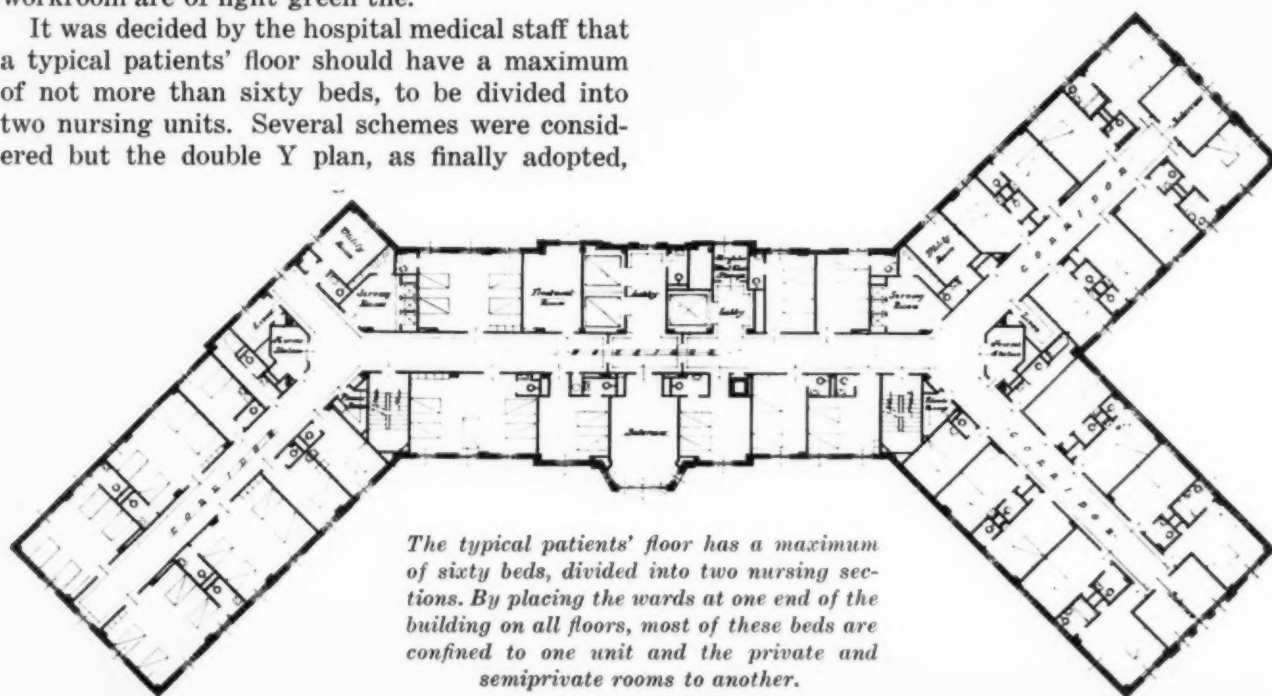


baby bassinets in the nurseries. Special formulas for the babies are made up on the sixth floor and placed in refrigerated cabinets in the nursery, where they are heated before serving.

The delivery and labor rooms are in a separate wing, entirely shut off from the rest of the floor. There are two major delivery rooms, one emergency delivery room, three labor rooms and a preparation room. There are also a doctors' room, an office and a nurses' workroom in this wing. All delivery and labor rooms have soundproofed ceilings. The walls in the delivery rooms and nurses' workroom are of light green tile.

It was decided by the hospital medical staff that a typical patients' floor should have a maximum of not more than sixty beds, to be divided into two nursing units. Several schemes were considered but the double Y plan, as finally adopted,

seemed the most practical in every respect. Traffic, which naturally centers around the nursing facilities of each unit, is reduced to a minimum, the maximum distance a nurse has to travel in caring for her patients being 75 feet. This enables the nursing staff to care for more patients than would ordinarily be possible in a hospital of the horizontal type. By placing the wards at one end of the building on all floors, it is possible to confine most of these beds to one unit and the private and semiprivate rooms to another. This was considered desirable as the nursing requirements for



*The typical patients' floor has a maximum of sixty beds, divided into two nursing sections. By placing the wards at one end of the building on all floors, most of these beds are confined to one unit and the private and semiprivate rooms to another.*



each are somewhat different. This plan also provided for sunlight in practically all rooms at some time during the day and many of the rooms have the benefit of the prevailing breeze.

The third, fourth and fifth floors are so arranged that the various classes of patients may be separated, which ensures quiet and privacy for the private patients. The third floor has a separate unit for psychiatric patients, consisting of three rooms with special equipment. On each of these floors there are three rooms with special acoustical treatment. Each floor has two end solariums and one centrally placed solarium which may be used as a waiting room for visitors.

The sixth floor is given over entirely to children.

stretchers and for gas tanks. The walls of the operating rooms are of light green tile and these rooms are equipped with an air temperature control system.

In the x-ray department are the radiographic, fluoroscopic, deep therapy and superficial therapy rooms, a fracture room, a director's office, a viewing room, a dark room and a small waiting room. The walls of the radiographic and therapy rooms are lead lined.

The eighth and ninth floors, which are in the confines of the central tower, are planned for the resident staff. They contain a general living room, a bath, a trunk storage room and accommodations for approximately thirteen physicians. There is



*The materials used for the exterior of the new Springfield City Hospital are buff brick and Bedford stone trim.*

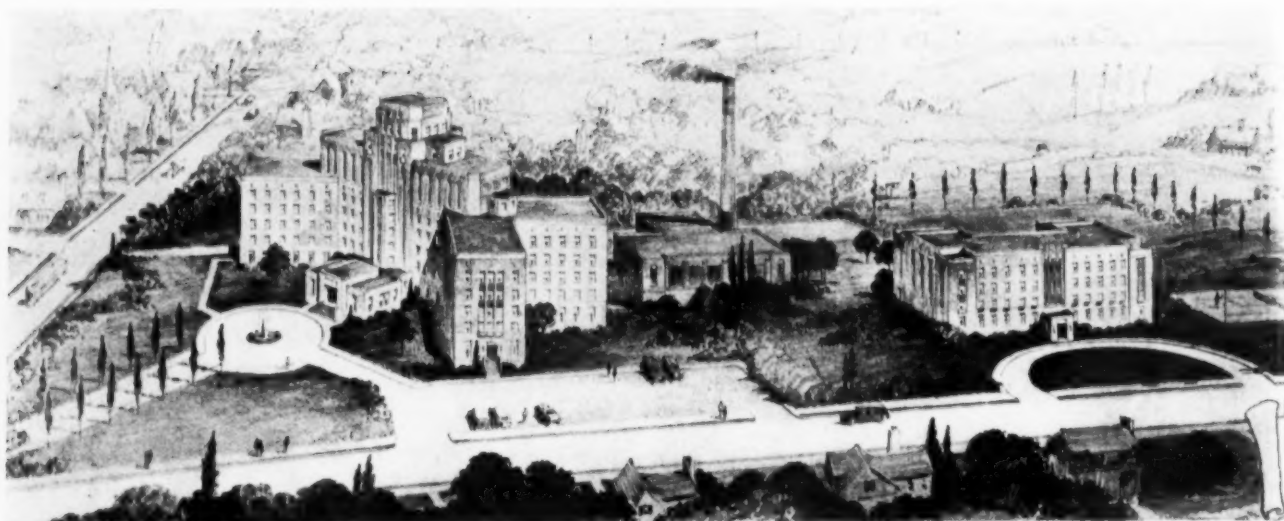
Three rooms with private baths are for the use of mother and child. A nursery containing twenty bassinets and a nursery bathroom are on this floor; also a formula room. A special feature of this floor is a spacious roof garden for heliotherapy treatments. Solariums fitted as playrooms are also provided. All children's beds on this floor are in wards each bed being placed in a cubicle, to prevent the passing of toys back and forth.

The surgical and x-ray departments are on the seventh floor. In the operating suite provisions are made for four major operating rooms, a sterilizing room, an instrument room, a tissue laboratory, two scrub-up rooms, a doctors' locker room and lounge, a nurses' locker room and storage for

also an open terrace. Entrance to the two roof gardens for men and women patients is provided on the seventh floor. In connection there are small storage rooms and toilet rooms for the use of the patients. Both roof gardens have quarry tile floors and are enclosed with heavy woven wire, as is the one for children on the sixth floor.

The tenth and eleventh floors house the machinery, the house tank and the film storage vaults.

Except in a few special rooms, terrazzo floors have been used throughout the entire hospital and the nurses' home. The corridor floors, except in the basement, are of rubber tile. The ceilings of the corridors on all patient floors are of acoustical tile.



*This airplane view shows the hospital group of three buildings, all of which are connected by underground tunnels.*

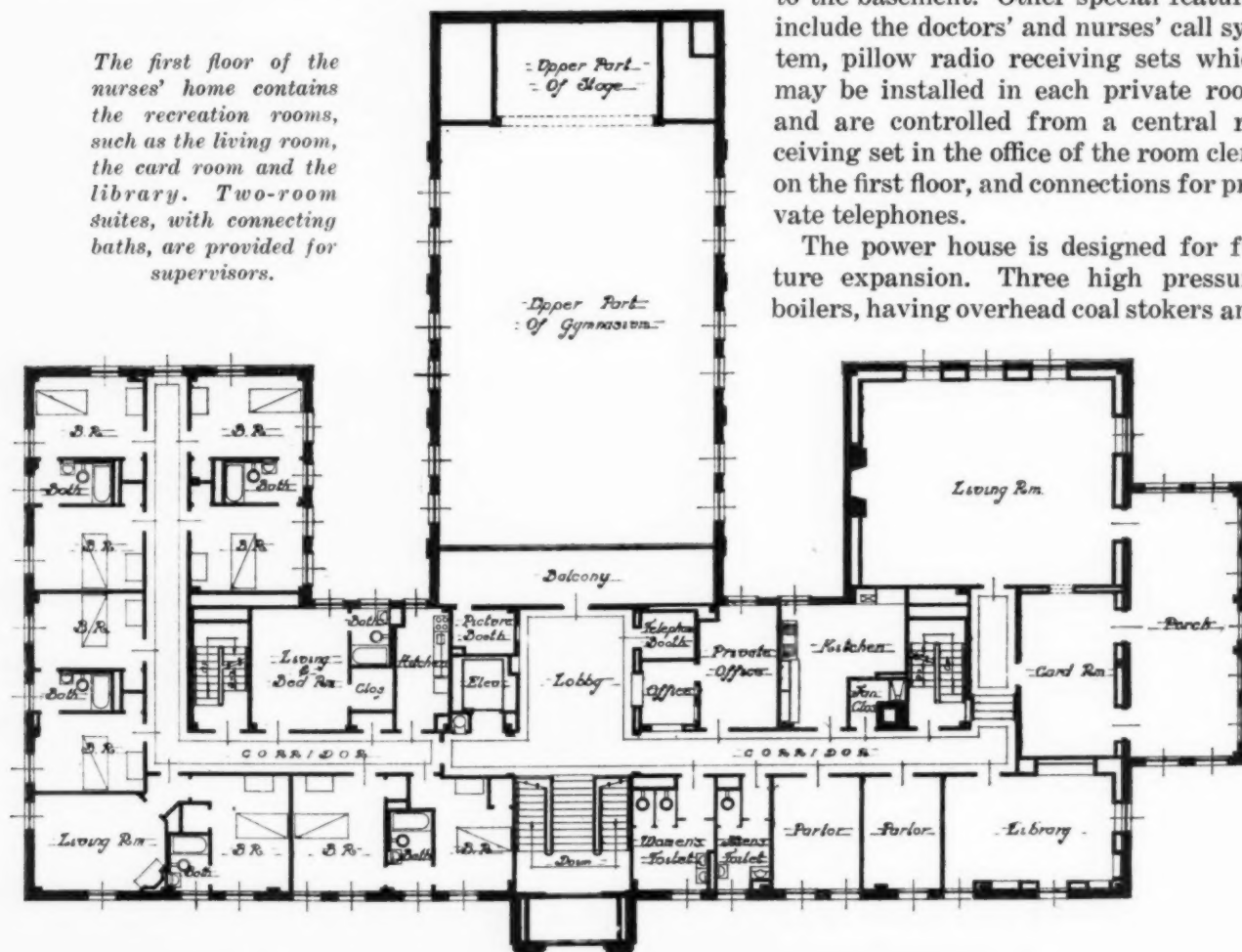
Four rooms on each typical floor, and also on the maternity floor, are planned as de luxe rooms. Each has a private bath with colored fixtures and a colored tile wainscot. The furnishings of these rooms are also of a little better grade than those in the other private rooms.

All wards have connecting toilets. Patients'

clothing is stored in individual lockers placed in the rooms. There is also a locker for the use of the nurse. Sliding curtains are used in the wards around each bed. Electric fans conveniently placed and mounted upon the walls are provided throughout all rooms. The laundry and incinerator chutes

are centrally placed and run from the eighth floor to the basement. Other special features include the doctors' and nurses' call system, pillow radio receiving sets which may be installed in each private room and are controlled from a central receiving set in the office of the room clerk on the first floor, and connections for private telephones.

The power house is designed for future expansion. Three high pressure boilers, having overhead coal stokers and



*The first floor of the nurses' home contains the recreation rooms, such as the living room, the card room and the library. Two-room suites, with connecting baths, are provided for supervisors.*



*The nurses' home accommodates a total of 125 nurses. Each floor has a general living room and a small kitchen.*

ash handling equipment, are used for developing heat and power. The hospital generates its own electricity, two generators being installed, either of which is of sufficient size to carry the entire load. An emergency hook-up to the local power plant is also provided. In connection with the power plant there are the water softener and the central refrigeration plant, carpenter and machine shops, storage rooms and a mattress sterilizing room. The laundry occupies the second floor. It is large, well lighted and ventilated and has a complete installation of the most modern equipment.

The nurses' home is planned to accommodate thirty-five graduate nurses and ninety student nurses. On the ground floor are a domestic science room, dietetic and chemistry laboratories and a demonstration room. There is also a small laundry for the use of the nurses, as well as trunk storage space and other service rooms. Entrance to the auditorium and gymnasium is from this floor. The auditorium is equipped with a small stage and gymnastic equipment for basket and volley ball and a projection booth for motion pictures. This room has been simply but effectively decorated with painted designs on the walls in bright colors and attractive light fixtures have been used.

On the first floor are the recreation rooms of the home. A colonial design has been used for the living room, the walls being paneled in knotty pine. The library is also wood paneled. Stenciled designs on the walls in bright colors and conventional designs in the terrazzo floor are used in the

card room. Two-room suites, with connecting baths, are provided on the floor for the use of the supervisors and department heads. In planning the nurses' home, it was felt that supervision of the student by the graduate nurses was not only unnecessary but was undesirable. For that reason the living quarters are on different floors. The

#### COST OF BUILDING

Excavating .....	\$ 6,156.00
General contract .....	833,385.00
Plumbing .....	123,930.73
Heating .....	85,710.00
Electrical .....	67,559.00
Ventilating .....	19,765.00
Temperature regulation .....	10,530.00
Pipe covering .....	15,780.00
Elevators .....	67,900.00
Kitchen equipment .....	29,992.00
Refrigerators .....	13,150.00
X-ray .....	21,700.00
Sterilizers .....	19,062.00
Electrocardiograph .....	1,500.00
Coal handling .....	10,400.00
Ash handling .....	3,476.00
Water softener .....	5,600.00
Refrigerator equipment .....	16,700.00
Painting .....	785.00
Laundry .....	43,032.00
Engines .....	40,450.00
Stokers .....	6,998.00
Boilers .....	21,856.00
Smoke breeching .....	1,225.00

**\$1,466,641.73**



rooms of the second floor, occupied by graduate nurses, have connecting baths.

The third and fourth floors, occupied by student nurses, are similar. These rooms are of sufficient size to accommodate two nurses. Each room has two closets and a lavatory. Two bath and toilet rooms, having both tub and shower baths are on each of these floors. A portion of the fourth floor, containing seven double rooms and two single rooms with connecting bath, are for the use of the night nurses. This section is shut off from the rest of the floor by sound-proofed doors, so that the nurses who are resting may be undisturbed.

In addition to the rooms occupied by the graduate and student nurses there is on each floor a general living room and a small kitchen. There are laundry and incinerator chutes from the floors to the basement. The elevator is of the automatic push button type.

The architects were given the contract for pre-

paring specifications and purchasing all equipment, including furnishings and draperies, and all equipment and supplies for every department of the hospital. Owing to the technical nature of much of this equipment there was some doubt in the minds of the building commission whether this should be handled by the architects. Since the hospital has been in operation, however, few changes in equipment have been made and no real need has arisen for any additional equipment. This was made possible only through the cooperation of the entire medical staff, the hospital superintendent and the heads of the various departments, who gave unsparingly of their time to prepare the first preliminary set-ups, within the limit of cost. Specifications were written for every item and bids asked from the various manufacturers. Before asking for final bids, an accurate estimate of cost of the entire set-up was made. By so doing it was possible to follow a definite plan and budget.

## A Plan for Relieving Hospitals of Automobile Accident Costs

The growing number of automobile accidents has resulted in a tremendous increase in the free service rendered by hospitals. In 1930 there were 33,000 deaths and more than a million injuries from automobile accidents alone. In the decade from 1921 to 1930 the number killed was 230,353.

The committee appointed by the Columbia University council for research in the social sciences to study compensation for automobile accidents has recently made its report, which is described in the *Journal of the American Medical Association*.

As to the losses sustained by hospitals incidental to caring for the injured victims of automobile accidents, the committee made several inquiries. Fourteen Philadelphia hospitals supplied information concerning 688 cases. The treatment involved ranged from first aid to long periods of hospitalization. Free treatment was given to 429, or 62 per cent of these patients. Charges amounting to \$16,410 were made in 259 cases. Of this amount, one-third remained unpaid a year after the accidents.

### *Compulsory Liability Insurance Favored*

In 1929, nineteen New Jersey hospitals cared for 1,781 automobile accident patients, rendering service in the amount of 22,440 hospital days. Bills for this service totaled \$106,089, of which amount 56 per cent, or \$59,530, was collected.

In 1930 the Ohio Hospital Association found that, of \$810,489.14 in hospital bills for service rendered automobile accident patients, \$406,761.24, or approximately 50 per cent, was considered uncollectible.

As a result of its studies, the committee goes on record as favoring compulsory liability insurance on the part of automobile owners. One provision of its proposed law covers the treatment and care of injured persons. It provides that the costs of medical or surgical care, hospital-

ization, nursing service, medicines, necessary apparatus and the like shall be borne by the automobile owner responsible for the accident. The charges for such service shall be in keeping with those that prevail in the community in which it is rendered. The injured person would be permitted to choose his physician and hospital, and protection of the car owner or his insurance carrier against fraud and collusion would be provided.

## Income Tax Ruling on Living Quarters

Of particular interest to hospital administrators at the present time in making up their income tax return is the following excerpt from Article 53, Regulations 74, of the Revenue Act of 1928:

"Where services are paid for with something other than money, the fair market value of the thing taken in payment is the amount to be included as income. If the services were rendered at a stipulated price, in the absence of evidence to the contrary, such price will be presumed to be the fair value of the compensation received. Compensation paid an employee of a corporation in its stock is to be treated as if the corporation sold the stock for its market value and paid the employee in cash. When living quarters such as camps are furnished to employees for the convenience of the employer, the ratable value need not be added to the cash compensation of the employees, but where a person receives as compensation for services rendered a salary and in addition thereto living quarters, the value to such person of the quarters furnished constitutes income subject to tax, etc."

When the administrator lives in the hospital, or has a house or apartment furnished by the hospital, the only question to decide would be whether in assuming the position it was clearly understood that he was living at or near the hospital solely for the convenience of the employer rather than as part of the salary.

# The Forgotten Patient—How Shall We Plan for Him?

By MORRIS HINENBURG, M.D.

Assistant Director, Montefiore Hospital, New York City

THE evolution of the modern hospital and the great advances that have been made in this branch of the medical field may justifiably be pointed to with pride. As we look back over the past few decades of hospital development we can identify the milestones that mark the many improvements that have been achieved. Many of the successes, some of them gained through the method of trial and error, are on the whole the results of an organized struggle for a scientific and humanitarian ideal. There have been failures along this path of progress and it is my purpose to discuss an outstanding failure which is not often given sufficient thought, rather than to dwell on any of the successes.

The care of the chronic sick, in all of its phases, has been and is still a stepchild in the scheme of hospital organization. There has been an obvious failure to coordinate the forces of hospital service to ensure adequate care for this large and deserving group in the community. Civilized communities many years ago undertook to protect the maimed, the halt and the blind against the forces of nature, the strong undertook the protection of the weak, but how well or how poorly the task has been accomplished in New York City during recent years is unfolded in such studies as that recently undertaken by the research bureau of the Welfare Council of the City of New York.

## *Voluntary Institutions Have Led the Way*

The facilities available for the care of this group (the aged, the "incurable" and the chronic sick, because the common denominator of illness is the joint possession of these three) are far from adequate as may be learned from these thoughtful analyses. There is now only one voluntary organization of any size in New York City that has met this demand in a scientific way. As in many other instances, voluntary institutions supported by private philanthropy have led the way, and public institutions, state, county and municipal, have followed, many of them unsuccessfully, with the result that the chronic sick are now scattered through institutions of various outworn types,

most of them inadequately equipped to care for the sick in accordance with enlightened social and communal standards.

What is the responsibility of the community for this group? The infectious diseases are more or less under control because of the interest of the community in its own protection from preventable disease. The causes and the effects of infectious diseases are well known and make a profound impression upon everyone who is interested in his own well-being if not in his neighbor's. With chronic diseases the picture is somewhat different, and the ailments, not being an immediate menace to the public health, are still considered the property of the patients to do with as they please. These patients are economically helpless and are a burden mostly on their immediate families. They are compelled to seek admission to any institution that will accept them and, like beggars, they are no choosers.

## *Must Succeed Where Others Have Failed*

It is this lack of organized care for the chronic sick that constitutes the failure in the history of hospital development to which I referred. With the progress that medicine has made in the past few decades the increase in the morbidity from chronic diseases has become more and more a matter of mathematical certainty. Further medical progress may be made in the study and prevention of diseases that tend toward chronicity, but we must provide at the same time the best clinical and allied facilities to treat those already stricken, to prevent further damage and to assist in the process of their rehabilitation. Voluntary organizations have accepted the burden of support for thousands of hospitals and semimedical institutions through the munificence of a comparatively small group, and it is clearly the responsibility of the public authorities to provide adequately for the rest, through public support.

It is not unusual when the organization and purposes of a hospital for chronic disease are under discussion among individuals presumed to be familiar with hospital work, to find that there are

few who realize that the diagnostic and therapeutic facilities for the care of chronic patients must be as complete as they are in the acute general hospital. The hospital that admits only chronic patients must try for success after others have failed, and must be prepared to accomplish, besides, what the acute hospital has volunteered to do for only a comparatively short period.

#### *Each Patient Needs Special Care*

Any institution for the care of the chronic sick must be prepared to retain patients until all medical effort, both diagnostic and therapeutic, has been exhausted in their behalf and longer if the patient still requires medical observation. Chronic illnesses are by definition prolonged illnesses, and instead of the average stay of a fortnight in the acute general hospital, patients may remain in the hospital weeks (as in relapses), months (as in retarded recovery from circulatory insults) and even years (as in the degenerative diseases). The diagnosis of incurability should never be made by one scientist in the presence of another. The custodial care received now by many of the patients in homes for the aged and "incurable," where many of the chronically ill are institutionalized, is not adequate for the large group of chronic sick. Patients of all ages and from all walks of life are in the ranks of the chronic army and each should receive care in accordance with his special needs. Chronic disease is a definite and specific branch of medicine which offers a greater challenge to the medical scientific world than do the acute diseases which for the most part, aside from operative conditions, are rather successfully treated by nature with the physician as an intelligent assistant. In the treatment of a chronic disease the physician must often combat nature and its terrible work.

Patients seeking admission to a hospital for chronic disease, if they have been sick for a long time, have been to many physicians and hospitals. Following a series of unsuccessful attempts to gain hospitalization for a sufficiently long period, and often with experiences in an acute hospital behind them, they apply to a hospital for chronic disease, or application is made for them. Just what influence a short stay in one institution and then in another, perhaps alternating with a stay at home, may have on the clinical condition of the patient it is unnecessary for me to describe, even to laymen, but it may reasonably be assumed that early admission for a period sufficiently long to permit adequate study and treatment, is more beneficial than several short interrupted periods of hospitalization. Experience has shown that the older the patient the greater the need for institutional care during illness, and the longer the disease is per-

mitted to progress the less is the chance for recovery. An accurate diagnosis must be established early and the condition treated intensively throughout the natural history of the disease.

Patients admitted to a chronic hospital equipped to give every service that the acute general hospital can give, are mostly in the advanced stages of disease and often are broken spiritually as well. They are admitted to wards where they have intimate contact with other patients like themselves. That the atmosphere is hardly ideal under the best of conditions requires no emphasis, but society still finds it too costly to deal with these patients individually and provides for them only in groups. It is therefore necessary to soften the blow of removal from the home environment, where the patient has been surrounded by those who care for him most and who have sacrificed themselves for him. The governing board and the administration of the hospital are called upon to do much for these patients, who must make the hospital their home over an indefinite period of time. The patient in the acute hospital is a medical problem only during his average stay of two weeks. In a hospital for chronic disease he is not only a complex medical problem but a difficult social and economic problem as well. The patient in the acute hospital may look forward to an early return to his home. The chronic patient may only be hopeful, and many patients are not hopeful.

#### *Don't Let Medical Staff Lose Interest*

I have emphasized the fact that the hospital for chronic disease must have the facilities of the acute general hospital in order that it may successfully render the necessary care to its patients. This principle applies to every branch of hospital service. Such a hospital as an institutional entity may perhaps limit its admissions to patients listed under the following classification:

1. General medical cases:
  - a. cardiac
  - b. vascular
  - c. renal
  - d. metabolic (such as diabetic)
  - e. gastroenterologic (stomach and intestines)
2. Tuberculous
3. Chronic surgical (including cancer and orthopedics)
4. Neurologic

Excluded from these main divisions are mental (unless special facilities are provided), contagious and obstetric patients.

Each division should be staffed by clinicians who are qualified as specialists, who have special interest in groups of chronic cases, and who are ap-



pointed through the cooperative efforts of the administration, the medical board and the lay governing body. Younger men of talent interested in special fields should be encouraged to accept positions on the attending staff, in preparation for the time when they may be called upon to take over the duties of their older colleagues. Every effort should be made to engage a competent resident staff, which is indeed the backbone of the organization. This may sound relatively simple but the problem of selecting and retaining a high grade staff is difficult. The danger is that the men are apt to lose interest and the wise administrator should make this his special study. Patients suffering from chronic disease are, as a rule, of little interest to the majority of physicians, but chronic disease affords unusual opportunity for study because patients are under observation over longer periods. It is important that the care of the chronic sick be in the hands of men and women who will have more than a passing interest in the patients under their care and who will recognize the right of the patient to the best that organized medicine can give him.

Special services should be organized as auxiliaries to the main clinical and laboratory divisions of such a hospital. There should be an ear, nose and throat service, departments for gynecology, gastroenterology, dermatology, ophthalmology, physiotherapy, radiotherapy, radiography, dentistry and occupational therapy, some of these being of particular value in this type of hospital. Many of the services of these special branches are of a consulting nature, leading to the diagnosis and treatment of obscure conditions for which the patient may or may not have entered the hospital. There should be close coordination of all the clinical units with the object of treating patients as individuals, for they should not be numbered as heart cases or tuberculous cases, especially if there are other clinical phases of the disease requiring expert care and treatment. The anatomy of the human body is complex and a patient cannot often be classified in this manner. The organs are interrelated and cannot be singled out for exclusive treatment in the presence of other ailing parts.

#### *The Acid Test of Nursing*

Following the selection and organization of a medical staff for the routine clinical care of patients, it will be apparent that the clinical material lends itself to investigative and educational activities. In this way elements are introduced that tend to elevate all branches of hospital service and bring distinct benefits to the immediate patient and to his successor. They tend to establish a sound basis for medical practice and are the stimulus neces-

sary to arouse and maintain the interest of the medical staff. However, we must not lose sight of the patient who may be scientifically uninteresting, but who requires the same expert care as his scientifically interesting and perhaps more fortunate fellow patient receives.

In another branch of the service, nursing, the problems of selection and organization are equally difficult. The glamour and dramatic interest of the acutely ill patient are as attractive to the majority of nurses as they are to physicians. Well trained graduate nurses should form the backbone of this department, and inexperienced student nurses should play a lesser rôle in the nursing organization of a hospital for chronic disease. Dr. E. M. Bluestone, director, Montefiore Hospital for Chronic Diseases, New York City, the largest voluntary hospital of its kind in this country, has often stated that nursing a chronic patient well is the acid test of nursing, and that statement is, in my opinion, the best thought to keep in mind in this phase of nursing service.

#### *Many Patients Require Special Diets*

The graduate nurses should, for the most part, limit their ward duties to the technical nursing activities, while the routine bedside care should be delegated to male and female attendants. Such an arrangement is satisfactory from the standpoint of both adequate service and economy. Everyone concerned must possess great patience.

The dietary department is one of the most valuable adjuncts to good medical service. In the ordinary run of cases in the hospital for chronic disease approximately one-fifth of the patients require special dietary service, not including many more for whom the regular diet is modified by prescribed additions in the way of nourishments and extras. In this department, as in the medical service, the abundance and variety of clinical material afford both the trained and the student dietitians many opportunities for study and investigation.

Social service of the kind seen in the organizations associated with our large hospital centers is a development of the last quarter of a century. With the discovery that social and economic factors influence the clinical condition of the patient, the medical profession has learned to depend upon this branch of hospital service for the establishment of a favorable environment for the more fortunate patient who is able to return to the community in a state of improved health. Thus the benefits of hospital care gained after months of hospitalization are not dissipated.

Occupational therapy, which plays a minor rôle in the general hospital for acute disease, is a highly valuable form of treatment in a hospital for chronic

disease as well as in homes for the aged and "incurable." The benefits of this form of therapy are many. Its importance is directly proportionate to the cooperation of physicians, therapists and patients and the attitude of the administration and the governing body.

Other departments that are essential to the proper conduct of an institution caring for the chronic sick are the physiotherapy department with its special branches of electrotherapy, hydrotherapy, thermotherapy and mechanotherapy; the dental department with resident and visiting, voluntary or paid dental staff (including an oral hygienist); the laboratory for the essential diagnostic tests required in present day medical practice, and the pharmacy. A pathology department is also indispensable in the correlation of the complicated clinical and postmortem findings, to promote the knowledge of chronic disease as well as of disease generally.

#### *Many Suffer From Heart Disease*

With the departments organized, it will be found on classifying the patients in such a hospital that it is necessary to deal with a great variety of clinical conditions. I have selected the purely medical division to illustrate this point. On this division the majority of patients will be found to suffer from heart disease in one form or another, and the major diseases may be roughly classified as follows: (1) heart disease—arteriosclerotic with cardiorenal vascular changes, rheumatic, subacute bacterial endocarditis; (2) diabetes mellitus complicated by cardiac damage, renal and cerebral changes and vascular occlusion in the extremities resulting in ulcers and gangrene; (3) hyperthyroidism; (4) chronic nephritis; (5) syphilis (advanced); (6) hypertension; (7) pernicious anemia; (8) bronchial asthma; (9) bronchiectasis; (10) leukemias; (11) lung abscesses.

The diagnosis must be established through clinical knowledge aided by diagnostic equipment. Disease cannot be treated empirically and collectively but must be considered individually for each patient in accordance with his needs. The patient with heart disease may therefore receive digitalis, in amounts that will not exceed his tolerance, and diuretics that will stimulate the excretion of fluid accumulated in the body cavities. He may require diets that are limited in fluid or poor in salt and he may be referred to the physiotherapy department for thermotherapy that will enable him to lose more fluid through the excretory mechanisms in the skin. The patient must be under constant medical supervision so that the forces released in his behalf can be modified as occasion requires for the best results.

Body fluids are examined chemically in the laboratory as a check on the body metabolism. Weight records of patients are important. Bedridden patients must be examined daily to prevent the dreaded bed sores and if this complication is immediately treated with proper ointments on the wards and with ultraviolet light in the physiotherapy department, serious results may be avoided. Patients suffering from diabetes mellitus complicated by a heart condition may in addition to their dietary treatment and insulin require all the treatment given to patients with heart disease. If the diabetic condition is further complicated by gangrene or ulceration of an extremity the treatment becomes more complex if surgical intervention is necessary. The same may hold true for every patient admitted to the institution and for that reason makeshift, inadequate or poorly organized arrangements for the care of these patients should not be tolerated. Halfway measures are better than none, but to approve them is to apologize for their existence and at the same time encourage their survival.

The nurse should be prepared intelligently to interpret the instructions given to her by the physician and to administer prescribed medication during his absence. Her observations should be a matter of record and the data for each patient should be compiled with painstaking care. To record only the admission of the patient, the length of his stay and his final disposition is to contribute little to medical knowledge.

#### *A Forward Step, but Not the Ideal*

I might go on to list many of the chronic diseases that are treated daily in institutions. In the end, however, I should arrive at the fundamental conclusion that the details of treatment are unimportant from the standpoint of this paper if the institution is organized on a sound and considerate basis with efficient medical and nursing staffs. The establishment of independent hospitals for the treatment of chronic disease unassociated with other forms of hospital service such as the units for the acute, the "incurable" and the aged, may be considered a step forward but the ideal is not reached if they continue to function under a policy of segregation of these units. Such segregation is an open violation of sound hospital policy. The plan recently put forward by Doctor Bluestone urges the actual merger of these units to form a medical organization that could study the natural history of disease from infancy to old age, governed by a single policy of service to the sick, regardless of the stage of the disease.<sup>1</sup>

<sup>1</sup>Read at a meeting of the New York State Association of Public Health Officials.



A store order is used by the various departments in ordering expendable supplies from the storekeeper. This slip must be signed by the department head and must be approved by the superintendent. When properly filled out it gives the stock clerk authority to drop or release the property card record of the particular item from the file. A complete record of all expendable supplies received is made on a receiving ticket. The storekeeper signs this ticket in order to certify that the specified articles have been received. This ticket



gives the stock clerk authority to insert these articles on the visible record portion of the tan colored property cards.

To make a daily record of all the income and outgo at the storeroom on the visible cards would be a large task. Consequently, store orders and receiving slips covering expendable property and credit, and debit and exchange slips on nonexpendable property are consolidated and recorded only once a month. This brings the perpetual inventory up to date as of the first day of each month.

#### *Gives Quick Facts on Stocks*

W. G. Eiche, auditor and property custodian, takes a physical inventory of stock in the storeroom once a year. It takes four men about five days to complete this work. This provides an official check of the visible record kept by the file clerk. The efficiency of this visible record is attested by the fact that in an emergency the file clerk can make a typewritten inventory from his records of the sum total and individual counts of the approximate 7,500 items on hand in the supply department in about three hours time. If a question should arise as to the accuracy of the visible record on an item, the matter can easily be checked by counting the stock of that particular article on hand in the storehouse. It is the practice at Gallinger Hospital to issue stock on Saturdays and to restrict the releases during the remainder of the week to emergency orders.

#### *How Broken Equipment Is Handled*

It is required that all nonexpendable property be surveyed before it can be junked or sold for salvage and dropped officially from the records. The District of Columbia maintains a board of survey of three members for that purpose. If a chair at the hospital, for example, is broken beyond repair, the department which has been using the chair turns in an exchange slip and procures a new chair from the storekeeper. The original chair, however, still continues on file on the nonexpendable property record of the file clerk until it is surveyed. If the chair has any value in the opinion of the survey board, it is sold, otherwise it is destroyed. Any nonexpendable article that can be repaired or reconditioned is rehabilitated and is not surveyed.

Adding machines, x-ray tubes and typewriters, which are identified by specific serial numbers, are recorded by means of individual file cards in order that individual cost accounts on the upkeep of these appliances and similar equipment may be maintained.

The general practice is to carry on hand in the storehouse a three months' stock of articles that

do not deteriorate. Foodstuffs are purchased on estimate three months in advance of use. Foodstuffs and soaps are stored in the basement of the supply department, which is large enough to accommodate one year's stock. The main floor of the storehouse contains metal shelves, racks and cases and is used for general storage. The second floor, which is used for overflow storage, also accommodates the repair shop where the nurses' uniforms are made and the hospital linen is repaired. Miscellaneous articles, which can be produced at a lower cost than it would be possible to procure them in small lots from commercial agencies, are made in the repair shop.

The outstanding advantage of the visible record, according to Mr. Eiche, is that it gives constant control over the stock on hand. A glance at the card records will tell how much of any given article or of all the items on the inventory is likely to be required in the next quarter or half year.

#### *Federal Committee Does All Purchasing*

The arrangement at Gallinger Hospital is such that the storekeeper and the stock file clerk function independently of each other. The records of these two account keepers can be used as a counter check.

The purchase of supplies for the hospital is made through the general supply committee of the federal government. This committee issues an annual schedule of supplies containing approximately sixty classes of items. All of these are predicated on specifications prepared by the federal specifications board. The identifying number of an item on the property card is the same as that used to designate the article in the federal schedule of supplies. In case the federal specifications do not cover certain articles which the hospital needs, specifications are drafted to cover the type and quality of the desired article. These specifications are circulated among the bidders interested in competing for such contracts.

#### *Visible Records Tell Departmental Costs*

An interchange of supplies with other District of Columbia institutions necessitates the identification and recording of such transfers as received by or sent from Gallinger hospital. A special voucher number is used in such instances in order to expedite the identification and record of the article. At the end of the year, a comparison of the consolidation cost of what has come in, what has been used and what has gone out from the supply department facilitates the compilation of the financial record. The monthly and yearly costs of operating the various hospital departments can be easily determined from the visible records.

# Fifteen Changes Increased This Hospital's Efficiency

By JACK CLAYTON NORRIS, M.D.

Pathologist, Grady Hospital, Atlanta, Ga.

GRADY Hospital, Atlanta, Ga., was founded in 1892 and was named in memory of Henry W. Grady. It is situated within three blocks of the business center of the city. The institution consists of the Elsas ward, for out-patients; the main building, which houses white patients only; the Steiner ward, for cancer research and treatment, which maintains a separate laboratory staff directed by Dr. E. L. Bishop; the Gray clinic for colored out-patients, and the Emory division. Six hundred beds are available.

All the units of the hospital are utilized by Emory University for the instruction of its medical students.

When Hon. James L. Key was reelected mayor of Atlanta in 1931 he recognized that Grady Hospital could best serve the community if it were free from political interference. Therefore, at the beginning of his new administration, Mayor Key appointed a board of trustees, composed of a group of Atlanta's well known and respected business men. The new board of trustees began to function immediately and Grady Hospital entered into a new era of medical and surgical progress. John B. Franklin, who was named superintendent, began to make numerous changes.

The following are among the changes that were inaugurated: (1) a complete, modernly equipped, centralized laboratory, with collateral laboratories; (2) the centralization of the diet kitchens; (3) the consolidation of the general supply stations; (4) the merging of the x-ray de-

partments; (5) the modernization of the morgue; (6) complete, modern hospital equipment in all departments; (7) the renovation of all buildings and grounds; (8) improvement and refurnishing of interns' and nurses' quarters and (9) the addition of extra nurses and nursing instructresses.

Dr. J. H. Hines was appointed full-time medical director in March, 1932, and immediately upon assuming his duties he proceeded to reorganize the medical staff.

Each department is headed by a staff, composed of visiting physicians and surgeons practicing in Atlanta. The intern staff is composed of forty-two men, classified as junior and senior members, all of whom are directly responsible to the medical director for the performance of their duties.

Among the reorganization changes introduced by Doctor Hines are the following: (1) the careful control and administration of all drugs and chemicals (an effort is being made to use medicines recommended by the hospital formulary); (2) the interns are required to attend all necropsies on patients who die on their wards, and the



*Two sections of the main laboratory unit are shown in the accompanying picture.*



*The secretary's office and a section of the supply room are shown at the left.*

Adjacent to the Whitehead laboratory is the clinical pathology laboratory. It is here that the students perform their work.

The neurosurgery laboratory is at the end of the hall. It is maintained largely for research in neurohistology. All specimens from cerebrospinal lesions are studied by this department.

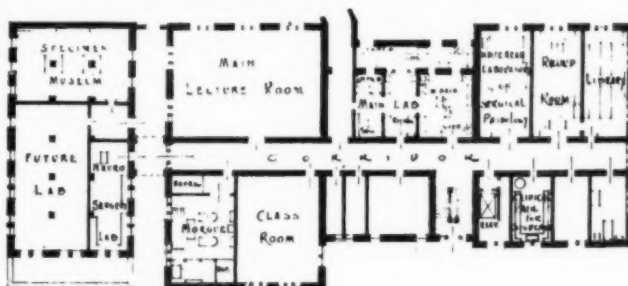
The morgue is between the main laboratory and the neurohistology laboratory. It is adjacent to

interns are also encouraged to attend as many other necropsies as possible; (3) a diabetic and a cardiopathic clinic for interns is held weekly; (4) the interns are given a reasonable opportunity to attend important clinical and surgical lectures given during the school year; (5) ward walks are held by the medical director every Friday at 2 p.m., at which time cases are reviewed and discussed and important clinical features are emphasized; (6) the clinic interns are required to take special instruction in x-ray technique, and the junior intern assigned to obstetrics is required to take special instruction in anesthesia.

From a physical standpoint, the laboratory divisions represent the most effective of the changes that have been made. The central laboratory is on the lower floor of the Emory unit, where it is easily accessible to all wards. The office of the full-time pathologist connects with the central laboratory. The main laboratory conducts examinations in serology, pathology, bacteriology and chemistry. The laboratory is spacious and is divided into several connecting rooms. It is equipped with modern apparatus and examinations can be made promptly. The laboratory force consists of a chief technician and his two assistants. The pathologist has for his assistants two senior medical students. The laboratory averages 6,500 examinations monthly.

The Whitehead surgical research laboratory, which is adjacent to the main laboratory, is directed by the professor of surgery. A surgical conference is held each Friday afternoon for the senior students and for the surgical staff.

the junior and senior lecture rooms, and is large, well lighted and equipped with two refrigerators, each capable of holding four bodies. There are two solid white mortuary tables and one large stainless metal table. The equipment includes a desk for the taking of stenographic notes during an autopsy. A frozen section histologic unit is used in studying tissues immediately upon their



*The laboratory and teaching unit layout is shown above.*

removal. There is an x-ray view box in the morgue so that the x-ray pictures may be shown while the necropsy is being performed. Whenever possible, the patient's clinical history is reviewed and the case is discussed by the attending physician prior to the autopsy. The pathologist removes the visceral organs in sections and discusses the post-mortem diagnosis. Histologic reports are made later. A clinicopathologic conference is held each week.

A new pathologic museum has recently been completed at Grady Hospital. Gross specimens will be mounted and numbered, and a brief description of the clinical and histologic features attached.



## The Problem of the Month:

# Should Hospitals Release News Concerning Patients?

**A**SISTER SUPERIOR writes for advice on a matter of publicity. In her town in the Southwest the newspaper runs a department called "Hospital Gossip" in which are listed the names of the patients in all of the hospitals, and sometimes comments are made upon the nature of their illness and the progress they are making. This is done only with the full consent of the patients.

Staff members have raised a point of ethics.

What do you think, how would you handle the entire matter if you were in the same position as this Sister Superior?

*Jerome F. Peck, Superintendent,  
Binghamton City Hospital, Binghamton, N. Y.*

"There are so many inconsistencies in our social life that many of them are not readily apparent. One of these is that in the small town that has only one or possibly two physicians, and where the residents are all well known to each other 'Personals' for the home paper, such as births, deaths, sickness, or a person's going to a hospital for an operation, are welcome items. Such items form an interesting feature of the news without any criticism coming from the medical profession. But as soon as a number of physicians settle in a community, and particularly if that community has a hospital with a staff of doctors, the picture changes. A protest will arise from the medical group if operations are mentioned, especially if they are referred to as difficult operations with good results, even though the patient has granted permission for the 'news' to be published.

"Why is this? Is it not due to professional jealousy and a fear that the doctor's name might by accident be made known?

"The patient and his acquiescence are the same as in the smaller town, so it is not due to a consideration of the patient.

"This raises an important question. Which is more vital—the interest of the community which brings in gifts of money and other support, enabling the hospital to broaden its activities and increase its usefulness to the community, or the personal feelings of the physician?

"This viewpoint should be presented to the members of the staff with the suggestion that the personal news be subject to their censorship. If this were done, I believe it would meet with the staff's approval."

*Dr. D. M. Morrill, Director,  
Blodgett Memorial Hospital, Grand Rapids, Mich.*

"The heading of the newspaper column, 'Hospital Gossip,' is inherently vicious. Gossip is about the only form of publicity of which we have had any quantity in the hospital world and the one form we should strive most to get away from. I dislike capitalizing the patient's situation and agree with the staff that this practice is open to much unethical abuse. If the staff member's name were not used, and references to the patient's illness implied no comparisons with care in other institutions or implications that cure was impossible, there might be no complaint on ethical grounds.

"I believe that every hospital patient is entitled to the same degree of privacy as to their personal affairs as would obtain in the home. It is, of course, true that in the social columns newspapers give many details of home events, and I do not object to authorized statements in the social columns of a newspaper regarding the presence of an individual in the hospital.

"More important than this, however, is the potential value of utilizing in a constructive manner the newspaper's willingness to be interested in hospital affairs. If I were the director of the hospital in the community concerned I should undertake to convince the editor of the newspaper of the viciousness of the heading, 'Hospital Gossip,' and should encourage him to use hospital items of the nature referred to in the social and personal mention columns. I should then undertake to convince him that the hospital has interesting information to offer the people through the newspaper so that he would continue to allow the equivalent space for the description of the many preventive and curative services of the hospital, its value as a community health center and its opportunities for teaching and research.

"The economic stress of the moment should not lead us into cheap and tawdry practices in the hospital's effort to keep alive. There is so much of sound dignity and value in the fulfillment of the purposes of a modern hospital that these values should be pointed out more clearly than ever in these days when people are exercising a high degree of judgment in the support of charitable endeavor."

*Macie N. Knapp, Superintendent,  
Brokaw Hospital, Normal, Ill.*

"I think that any contact which a hospital is able to maintain with the daily press is valuable, as we all know there comes a time in the history of every institution when it is desirable to present to the public, through the press, interesting facts about the institution's present standing and future growth.

"Personally, I have never been able to see any reason for publishing the names of patients in the hospital. The illness of a person and his admittance to the hospital are surely known by his relatives and close friends who, after all, are the ones who have the welfare of the patient at heart. I believe on the whole these lists, when published, are read mainly by people who are simply curious.

"I think every sick person is entitled to such privacy as he may desire and even though a request is sent to the admitting office that the patient's name be withheld from the press, still it is sometimes published, much to the annoyance of the patient and his family."

*Francis C. Leupold, Superintendent,  
Montgomery Hospital, Norristown, Pa.*

"The matter of hospital publicity as it pertains to the names of individual patients and information concerning them cannot be considered on the face of publicity alone. It is and must be looked upon differently in various communities. Irrespective of the community, however, nothing must be done in a publicity way that constitutes a breach of ethics.

"I find that this type of publicity is received and looked upon differently in Norristown from what it was in Philadelphia, where I spent all of my hospital years prior to coming to Norristown. In the larger cities it is difficult for two reasons to get real newspaper publicity; first, because the newspapers usually have more news than they can use, and second, with a large number of hospitals in the city the newspapers cannot show partiality. In a community such as Norristown where there is

only one hospital, representatives of the two newspapers, both of which are evening dailies, call several times a day for news. Hospital news seems to be of great interest to the 50,000 people of this community.

"The only type of publicity of this kind that I permit (and then only with the consent of the patient) is the name and address of the patient and whether he was admitted as a medical or a surgical case. I also allow notices telling of births in the hospital. The exact nature of the illness of the patient is never stated. This has no news value to anyone and to my mind to announce it would be unethical. Never, under any circumstances, is the name of the house or the attending physician given out. I cannot see anything wrong in giving out comment on the progress of a well known patient, without of course giving any details. All that should be done is to state that Mr. X, who is a patient at the hospital, is recuperating to the satisfaction of his physician.

"There is a big difference in hospital news that pertains to the patient and sheer gossip. I would be against a daily list of hospital patients and would only permit the release of such a list as applies to admissions and discharges. I find that with close personal contact with the editors and reporters I can sell my viewpoint and get cooperation."

*Robert Jolly, Superintendent,  
Memorial Hospital, Houston, Tex.*

"I think the size of the community would have a lot to do with whether or not the names of hospital patients should be published in the daily newspapers. In small communities where everyone knows everyone else and where everyone is interested in the welfare of the others, I do not think there would be much objection to publishing the names of patients. However, I would not, under any circumstances, say anything about the type of illness of the patient. Of course, I would not even publish the name unless it were satisfactory to the patient.

"I think in maternity cases there would not be any objection from anyone, either in the small community or the large community, for the reason that most folks send out announcements of the fact that the baby has been born.

"When it comes to large cities I doubt the wisdom of publishing the names. I have always been strong for publicity for hospitals, but I never have summoned enough nerve to start that sort of publicity for our hospital. I know that hospitals in Memphis, Tenn., have been doing this for a long time and have had no bad results, but I do not think we want to use this method."

*The Hospital and the Medical Staff:\**

# The Hospital's Rôle in Managing Respiratory Infections

*From the Standpoint of the Internist*

By GEORGE MORRIS PERSOL, M.D.  
Professor of Internal Medicine, Graduate School,  
University of Pennsylvania, Philadelphia

FROM the economic as well as the medical standpoint no diseases are more widespread or more disastrous than infections of the respiratory tract.

These infections, which are especially prevalent during the winter and spring months, are responsible directly or indirectly for a large number of deaths. Even when they are not fatal, these infections are attended by suffering and disability that impose upon the workers of practically every community untold loss in both time and money. In spite of their acknowledged importance, and despite the large amount of research that has been and is being done upon infections of the respiratory tract, it is unfortunately true that they are still so difficult to control that they frequently attain epidemic proportions. It is not surprising, therefore, that hospitals are constantly being called upon to aid in the fight against respiratory tract infections and to care for many such cases.

The simple acute infections of the nasopharynx represented by the various forms of the common cold rarely find their way into the wards of hospitals. Sufferers from these infections are frequently ambulatory, and the vast majority of them are taken care of in the home, in the doctor's office or in the outpatient department of the hospital. The same may be said of the simpler forms of tonsillitis. It is only when an infection of the tonsils is unusually severe, due to some uncommon forms of organism, that the hospital is sought.

There is an unfortunate tendency on the part of many individuals to look upon colds and sore throats as trivial affairs. A large number of these infections are neglected, with the result that they are rapidly spread from one individual to another and more serious complications are given an opportunity to develop. This is particularly true in

the case of tonsillitis, which often is the starting point for the rheumatic state and its associated valvular heart disease. Much could be done to lessen the ravages of acute respiratory tract infections if people could be taught to understand the importance of these infections and could be induced to seek early treatment at the hospital clinic or from their own physicians.

If the acute cold does not present a problem for hospitals, the same cannot be said of its manifold complications and sequelæ. In the wake of a simple infection of the nose and throat there may follow such serious infectious processes as suppuration of the middle ear, which may lead to acute infection of the mastoid, which in turn may prove the starting point of thrombosis of the veins within the skull, brain abscesses and even fatal meningitis. Severe infections of the various accessory sinuses frequently complicate a cold in the head. A tonsillitis may readily be complicated by abscesses around the tonsils and severe suppuration of the glands of the neck. The acute upper respiratory tract infections may spread downward involving the larynx, the windpipe, the bronchial tubes, and finally, in some instances, the lungs themselves.

*Hospital Care Often Necessary*

A fair proportion of the cases of these types require hospital care for their proper treatment. Infections that involve the tonsils, the ear, the mastoid and the sinuses frequently require surgical intervention. Therefore, the hospital that attempts to handle this group of cases should have on its staff competent otolaryngologic surgeons, and should be prepared to furnish the necessary laboratory and x-ray examinations which are often essential for the proper diagnosis of these conditions. It is highly desirable that these nose, throat and ear cases should not be housed in the general wards, but should be kept in their own department away from other types of infection. They should be taken care of by nurses that are trained in the management of this type of case.

The milder forms of infection of the larynx and of the larger bronchial tubes can generally be successfully treated in the home. But when they are hospitalized, or when they develop in cases that

\*This article is one of a series of discussions for the purpose of ensuring better team work in the hospital through a fuller understanding of the interrelated problems of the medical staff and the administration. The first article of the series appeared in the January issue.



are already in the hospital, it should be remembered that they are infectious. What may have been a mild and harmless infection in one individual may become a serious disease in another. Therefore, these infections should be kept out of the general wards and should be given a reasonable degree of isolation, even if this consists only of cubicalization. The sputum of these cases should be carefully collected, disinfected and destroyed. The patient should be taught to cough into paper handkerchiefs. The handkerchiefs should be placed in proper receptacles, such as paper bags attached to the bed. Not only for their own safety but also to prevent the spread of respiratory tract infections, those handling such cases, even mild bronchitis and laryngitis, would do well, whenever possible, to wear gowns and masks. Above all, both the patients and attendants should be impressed with the importance of keeping their hands thoroughly clean and of always washing them after contact with any possibly infective material.

#### *Influenza Epidemics Should Be a Lesson*

The more severe cases of bronchitis, associated with considerable fever and widespread involvement of the small bronchial tubes, are properly hospital cases. Every such case is potentially serious because of the danger of bronchopneumonia. These infections are particularly dangerous in very young children and in elderly people. Every case of severe bronchitis of this type requires absolute rest, medical supervision and careful nursing. What has been said about the isolation of the milder cases of respiratory tract infection is even more applicable to this more serious group. Most infections of the bronchial tree are due to the organisms that are responsible for the common cold. A certain number, however, are due to the influenza bacillus, and are a part of the clinical manifestations of that infectious disease known as influenza. All cases of bronchitis, or any respiratory tract infection in which there is even a reasonable suspicion that influenza is the underlying factor, should be promptly and thoroughly isolated. Every precaution should be exercised that may tend to limit the spread of this infection. The devastation wrought by the epidemics of influenza in 1918 and 1919 is proof of the necessity and importance of such measures.

The most serious of the acute respiratory tract infections are those that involve the lung itself—the pneumonias. It is in the care of these infections that the hospital is called upon to play one of its most important rôles. There are two main subdivisions of pneumonia. In one the inflammation of the lung tissue is patchy and scattered, and most of the areas involved lie around the terminal

bronchi. This type is usually referred to as bronchopneumonia. In the other form of pneumonia, a lobe, or sometimes many lobes, become rapidly and extensively inflamed and consolidated. This is known as lobar pneumonia. These two great divisions of pneumonia differ in their mode of development, their onset, their clinical course, their prognosis and their management.

Bronchopneumonia is essentially a secondary disease. It occurs as a complication of some infection of the upper respiratory tract. It frequently complicates acute infectious diseases, particularly measles, whooping cough, various septic processes and influenza. It may occur as a terminal infection in those who are suffering from heart disease, or any other chronic visceral disturbance, and it may be a sequel to operations and anesthesia.

In addition to the more common secondary type of bronchopneumonia, there is a primary form of bronchopneumonia, of which there are two varieties, one, a comparatively mild form, due to the pneumococcus that occurs in children usually under two years of age; the other, the epidemic variety. This is usually due to infection of the lungs by a hemolytic streptococcus. This form may attack individuals of any age, it is severe and often fatal. The last great outbreak of this form of streptococcal pneumonia occurred during the World War.

#### *"The Captain of the Men of Death"*

Bronchopneumonia is always a serious disease, particularly in the very young, the aged, and those who are debilitated from previous infections or chronic diseases. Every case requires the most careful management and supervision. The onset of the disease is usually gradual, it runs a course of uncertain duration, and the fever curve may be very irregular. In old and debilitated individuals bronchopneumonia may exist with little or no fever. Coincident with a cough, there is usually a considerable amount of sputum present which contains the infecting organisms and should, therefore, be carefully collected and disinfected. The disease rarely ends by crisis, the temperature coming down gradually.

There is unfortunately no specific therapy for bronchopneumonia. Vaccines have proved of no value during the course of the disease and only rarely have any of the pneumococcal serums been successfully employed. The treatment must be largely symptomatic and supportive, but in this, as in other forms of pneumonia, proper nursing and care of the patient are of paramount importance. Patients suffering from bronchopneumonia should, if possible, be kept in separate wards or at least

separated from the other patients in the general wards, for the organisms that produce bronchopneumonia vary greatly. It is therefore advisable that cases of bronchopneumonia be screened from each other, or better, cubicalized. This is particularly true when streptococcic epidemic bronchopneumonia is present, as cross infection by the hemolytic streptococcus is notoriously disastrous. The patient should be kept in a cool, well ventilated ward, and should not be exposed to drafts. In the cases of young children and old, debilitated individuals, too much cold air may prove detrimental. Separate utensils for each patient, the wearing of gowns and masks by those attending cases of bronchopneumonia, particularly when they are of streptococcic origin, and careful attention to disinfecting the hands should be insisted upon. Special forms of therapy which occasionally are required in bronchopneumonia, such as the use of oxygen or glucose, will be discussed later.

Lobar pneumonia is usually due to the pneumococcus. This disease, to quote the late Sir William Osler, "is one of the most widespread and fatal of all acute diseases," and "has become 'The Captain of the Men of Death.' " The onset of lobar pneumonia is usually sudden. Those who a short time before were apparently in good health may be stricken with unexpected rapidity. The disease is ushered in by a chill, followed by a high, continuous fever, which may run on an average for seven to twelve days, and usually terminates abruptly by crisis. It is characterized by shortness of breath, pain in the side, cough and the expectoration of sticky, rusty sputum, which is loaded with pneumococci.

#### *Prompt and Accurate Typing Essential*

It has been shown that pneumococci may be divided into four types that have definite immunologic differences. They are usually referred to as Types 1, 2, 3 and 4. The progress of the disease, its outlook and especially its specific treatment, depend upon the early recognition of the type of pneumococcus causing the pneumonia. It is essential that hospitals be equipped with the necessary laboratory facilities for the rapid and accurate typing of pneumococci. It has been shown that the only types of lobar pneumonia in which specific therapy in the form of antipneumococcic serum is of value is in infections due to Types 1 and 2 organisms. In cases belonging to these groups, if the proper serum can be administered promptly, not later than the third day of the disease, encouraging results may be looked for. Therefore, if typing is not done on pneumonia patients and if suitable antipneumonic serum is not instantly available in the hospital, individuals are deprived of thera-

peutic measures which may prove life-saving in this dread disease.

Cole and his co-workers at the Rockefeller Institute are responsible for the development of pneumococcic serum. At first, serums for the several types of pneumococci were tried out. Experience has shown that the type of pneumococcus most readily affected by serum is Type 1. Serum therapy is practically limited to pneumonias that are due to this group of organisms. It should be remembered that the Type 1 serum should be used only in the treatment of Type 1 pneumonia, and unless it is employed early, preferably within the first twenty-four or forty-eight hours, little good can be expected from its use.

#### *Should Be a Recognized Form of Treatment*

During the last few years preparations of pneumococcus antibodies have been prepared. Huntoon has prepared a solution of pneumococcus antibodies which contain the protective substances against Types 1, 2 and 3 pneumococci, with little serum protein. A somewhat similar concentrated solution of pneumococcus antibodies has also been worked out by Felton. The advantage of these antibodies solutions is that it is not necessary to type the sputum before they are used. They may be used in Types 1, 2 or 3 pneumonia, and, as in the case of pneumococcic serum, they must be used early in the disease to be effective. When used within the first two or three days of the onset, good results have frequently been obtained and a definite lowering of the mortality rate in at least Type 1 and Type 2 pneumonias has been brought about. Further progress along the line of specific therapy in lobar pneumonia is being made and will doubtless continue. We are justified in stating, however, that at the present time properly carried out treatment with pneumococcic serum or solutions of pneumococcus antibodies in the properly selected cases should be a recognized form of treatment in every well equipped hospital.

Thus far, there is little of either clinical or experimental proof to justify the use of pneumococcus vaccine in lobar pneumonia. The same may be said of the various chemotherapeutic suggestions that have been made from time to time and employed to a limited extent.

A recent important adjunct to treatment of this disease is the use of oxygen, which is indicated when cyanosis and other signs of lack of oxygen are manifested. The obsolete method of administering oxygen by a funnel is useless. The most satisfactory method of giving oxygen is by means of the oxygen chamber. Such a room is expensive and unfortunately not found in many hospitals. As a substitute for the chamber, which has many prac-



tical advantages, is a portable oxygen tent, several types of which have been devised. The tent should be large enough to cover the upper portion of the patient's body. The newer oxygen tents make it possible to supply from 40 to 60 per cent of oxygen to the patient. The concentration of oxygen, as well as the temperature within the tent, can be regulated. Patients suffering from oxygen deficiency experience much relief when placed in such an apparatus, and it is only rarely that any serious objection is made to its use. The newer tents are in every way superior to the old oxygen head tents which become uncomfortably hot and are not capable of proper regulation. When no other method is available, the nasal catheter may be used. This method, however, entails an enormous waste of oxygen. Oxygen therapy in pneumonia has a definite and important place and should be available in every hospital. The life saving value of such an apparatus in certain cases will more than justify the expense involved in its acquisition. Even in bronchopneumonia, when anoxemia exists, oxygen therapy is decidedly indicated.

Other methods of treatment that may be urgently required in the course of any pneumonia are such procedures as blood transfusions, and intravenous injections of glucose or salt solution. Every well equipped hospital ward should be prepared for these measures.

An efficient portable bedside x-ray apparatus should be on hand, not only in order to facilitate early diagnosis, but also to recognize some of the sequelæ and the complications of lobar pneumonia, particularly early empyema.

#### *Lobar Pneumonia Requires Rigid Quarantine*

It would be out of place in this discussion to attempt to take up the detailed symptomatic treatment of lobar pneumonia; but the subject should not be dismissed without emphasizing some of the important prophylactic measures that should be instituted.

Numerous observations have clearly shown that pneumonia is spread by carriers. The organism that causes pneumonia is present in the mouths of patients during the disease. As late as ninety days after recovery the sputum is highly infectious, and things with which it comes in contact are contaminated with pneumococci. It is therefore evident that every patient suffering from lobar pneumonia should be rigidly quarantined. Nurses and attendants upon pneumonia patients should be impressed with the infectious nature of the disease and should be made to take every precaution against spreading the virulent pneumococci. All the measures that have been referred to above in the discussion of bronchitis and bronchopneumonia should be

more rigidly enforced in the handling of lobar pneumonia. The patients should be isolated from other patients and from each other in cool, well ventilated rooms. A minimum amount of contact with the outside community should be allowed in order to minimize the spread of this grave infection.

#### *Bronchoscopic Clinic Is Important Adjunct*

In recent years, as the result of marked progress in bronchoscopic and x-ray diagnosis, an increased amount of interest has developed in chronic infections of the respiratory tract of nontuberculous origin. In this group fall such conditions as bronchial asthma, chronic bronchitis and dilation of the bronchi, pulmonary abscesses, and malignant disease of the lungs, as well as foreign bodies in the bronchi with the resulting inflammatory changes which they may produce. Formerly, the majority of such cases were handled ineffectually even in hospitals. Today, as the result of advances in bronchoscopy and the close cooperation between the bronchoscopic clinic and the x-ray department, much has been accomplished not only in the line of diagnosis, but also in the management of these cases. Now, in every hospital that is properly equipped for their handling, an ever increasing number of these cases may be found in its wards.

A bronchoscopic clinic is rapidly becoming a necessary adjunct to every well organized general hospital. By means of bronchoscopy, it is not only frequently possible to recognize but sometimes actually to remove the various tumors that originate in the bronchi. The removal of foreign bodies by the bronchoscope from the bronchi and lungs has been much discussed and has attained great importance.

Less well known, but perhaps of more far reaching significance, are the results obtained by bronchoscopy in the treatment of chronic pulmonary abscesses, in the treatment of chronic dilatation of the bronchial tubes, and even in treating cases of asthma associated with the latter condition. In many instances of chronic pulmonary infection, it is possible by means of the bronchoscope to obtain the actual organisms that are producing these chronic suppurative changes so that autogenous vaccines may be made that are of distinct benefit in a certain number of these causes. In hospitals that are organized for the proper management of such cases, the pulmonary surgeon is also taking his proper place along with the internist, the bronchoscopist and the skiagrapher. The result is that a large number of heretofore hopelessly sick individuals may now have their chronic pulmonary infections successfully managed and relieved by constructive mechanical methods.



In the foregoing discussion of respiratory tract infections, all reference to infections due to the diphtheria bacillus or the tubercle bacillus have been purposely omitted, since both diphtheria and tuberculosis are diseases of such a special nature that they are entitled to independent consideration.

The hospital that is properly equipped both in specially trained personnel and in laboratory facilities is destined to take an increasingly important place in the modern management of both the acute and the chronic infections of the respiratory tract.

### *From the Standpoint of the Hospital Administrator*

By DONALD CAMPBELL SMELZER, M.D.  
Superintendent, Graduate Hospital of the University  
of Pennsylvania, Philadelphia

When a modern hospital admits cases of respiratory tract infection to its wards or rooms it immediately assumes a tremendous responsibility, inasmuch as it must provide the necessary equipment, apparatus, laboratory facilities, diagnostic agencies, biologicals, serums, and medications, that have been established as successful measures to combat the acute infections, and to rehabilitate those suffering from the more chronic ailments of the respiratory tract.

In spite of the expensive nature of the majority of these items, the administration of a hospital may be justly criticized if they are not available, when called for, in the treatment of both acute and chronic cases of respiratory disease, if the patient is admitted. It would be far better to refuse to admit the patient and recommend his admission to another institution than to accept the responsibility for treatment knowing that the institution lacks the equipment, the serums and the laboratory facilities now deemed necessary for the successful treatment of these dangerous diseases. The magnitude of the responsibility is best appreciated when the course of an acute respiratory infection is analyzed from an administrative standpoint.

The patient, on admission, must be placed in a well ventilated room or ward, and isolated from other patients to prevent the spread of the infection. The bed must be of a type that will permit the patient to be raised to a sitting position without unnecessary moving. Adequate skilled nursing is an absolute essential. Laboratory facilities must be available day and night to make the necessary blood counts, typing and other examinations without delay. An apparatus for the administration of oxygen must be on hand and there must be a plentiful supply of oxygen in reserve. After the diag-

nosis is made, the medication or serums ordered should be immediately available. Particularly in lobar pneumonia, much depends on the prompt administration of Type 1 or Type 2 serum, if indicated. The x-ray plays an important part in the diagnosis and in following the course of the disease, and a portable x-ray unit is desirable so as to cause as little disturbance to the patient as possible. The keeping of a careful record of the temperature, the pulse, and the respiration, and the notes regarding the unusual signs or objective symptoms, are important to the physician in charge of the case.

Unnecessary noises both inside and outside the room should be minimized, as well as the enforcement of the "No Visitors" order, so that the acutely ill patient may have as much quiet and sleep as is possible.

The proper filling of dietary orders is also an important factor, particularly in convalescence.

The more chronic types of respiratory disease, if accepted, are also a definite hospital responsibility from an economic standpoint. These are divided into the nontuberculous, and tuberculous, and the hospital management of these cases must be considered separately. The nontuberculous case may occupy a bed in the ward with other medical or surgical patients, while the tuberculous case must be isolated and placed on precautions.

Asthma cases must have the necessary protein-sensitizing materials for diagnosis, and must be provided with mattresses and pillows of a special stuffing, if indicated. Special foods must be provided, if ordered, as well as the often costly but necessary medications.

#### *Must Keep Abreast of the Times*

In chronic cases requiring surgical treatment, such as the draining of an empyema, the suction apparatus and later the blow bottles must be provided.

Bronchoscopy now plays a most important part in the treatment of chronic respiratory tract diseases, and should be a special department under trained physicians, with modern equipment, apparatus and instruments at their disposal. The treatment of lung abscesses, tumors and the removal of foreign bodies from the respiratory tract all fall into this field.

Tuberculous cases, especially early tuberculosis, require the combined efforts of the internist, the surgeon, the bronchoscopist and the roentgenologist. For the early collapse of the lung, an artificial pneumothorax apparatus is essential. Special instruments are necessary for the bronchoscopist and the surgeon for other procedures, and modern x-ray equipment is also needed for the successful

diagnosis and treatment of this disease. Many early tuberculous patients can be cured in a properly equipped hospital. Many hospital days may be saved by the proper organization of services in the treatment of early tuberculosis having a cavity formation in the lung.

It is thus apparent that the acceptance of cases of respiratory disease involves a considerable outlay of money for equipment and drugs, as well as, in some cases, the employment of a skilled personnel. The budget administrator must face these facts with his board of trustees, and in spite of the serious economic conditions he must meet what now is equal to an emergency. The hospital is a definite community asset and as such must keep abreast of the times. Respiratory tract diseases, especially the pneumonias and influenza, are with us constantly and are no respectors of persons. Inasmuch as the logical place to treat these diseases is in a hospital, the hospital, if it is to play its part

in the community, must be prepared to provide the newest scientific methods for combating these diseases.

The advance made in the science of medicine has been particularly rapid in the last few years. Medical colleges, the endowed laboratories of large foundations and the laboratories of the large commercial pharmaceutical companies have produced serums, vaccines and medicines that have been almost miraculous in the treatment of disease. Much money has been spent in this research and experimentation and the products are necessarily costly. Some of these products, it is true, survive but a short time, but nevertheless, others, particularly those used in respiratory tract diseases, have proved efficacious and are now recognized as the proper treatment of some of these diseases. The modern hospital of today, therefore, must provide these items to rich and poor alike, if it is to live up to the high standards that determine it as such.

## A Fixed Periodic Payment Plan for Hospitals and Doctors

Complete medical care and hospitalization are assured persons of moderate means in a plan originated by Dr. John H. Graves, chairman, committee on public relations, California Medical Association, and president, St. Francis Hospital, San Francisco.

Payment for illness would be handled through local county medical societies, cooperating with hospitals in their respective communities, according to Doctor Graves' plan. This would eliminate at the outset all profits that ordinarily would go to agencies, insurance companies and promoters, which means that the service can be rendered for a comparatively nominal sum monthly.

The plan permits each beneficiary to select his own physician from the membership of the county medical society. The medical care would cover all types of disease and injury.

The patient would also select his own hospital from the list of those cooperating with the society. The hospital service would include use of the operating room and the x-ray department, drugs, dressings and floor nursing. The service, however, would not include contagious diseases.

The state medical council has endorsed the plan and is presenting it to the various county medical societies. Each society that undertakes the plan will fix its own rates and arrive at its own definition of a person of moderate means.

In commenting on the plan, Doctor Graves said:

"The medical profession, through such county units as desired, will offer professional service to the people whose incomes for the past year are below a certain fixed sum. Professional service means physicians' and surgeons' attendance only when the individual is not protected under the Workmen's Compensation Act. The payments would be on a fixed annual, semiannual or quarterly basis.

"Each county medical unit will operate as a partnership and the division of monies received will be on a unit basis—a fixed amount for each type of service.

"Further to assist persons of moderate means, the part-

nership of the county medical society can promote a plan for hospitalization among the hospitals of their respective communities. The hospitals would form a cooperative organization offering to the public for an annual, semi-annual or quarterly fee, ward accommodations with ordinary laboratory, operating room and floor nursing service for all diseases not termed contagious, and for all injuries to persons not covered under the Workmen's Compensation Act, for periods of one, two and three months' duration.

"The cost of the hospital treatment would depend upon the period of hospitalization that the beneficiary desired. The necessity for, and duration of, hospitalization would be determined by the patient's physician and one representing the hospital.

"Such a plan would automatically bring in practically every hospital in the community after its adoption by any single hospital."

## Hospitals Favor "Cost-Plus" Basis in Construction Work

There has been a tendency of late to let hospital construction jobs on a cost-plus basis, the contractor guaranteeing that the building will cost no more than a specified amount, but agreeing to give the owner the benefit of any economies, according to the report of the American Hospital Association's committee on hospital planning and equipment.

This is a desirable plan for hospitals to follow in the presence of a falling market in both material and labor costs, the report indicates. Building costs have declined from 20 to 30 per cent below the peak costs of 1928, and the hospital that has funds in hand can purchase some fine bargains in the building market. Buildings that would have cost eighty-five cents per cubic foot in 1928 can now be constructed for sixty-five cents per cubic foot or less. Public construction financed on long term bonds could be done now at a saving to the taxpayer of the future.

# The Public Wants to Know What We Do for the Sick

By CHARLES H. YOUNG, M.D.

Director, Mountainside Hospital, Montclair, N. J.

MUCH of our thought today converges upon the problem of discovering new sources of hospital income. We are devising ways of inducing donors to give all they can, realizing that in prosperity all did not give to their reasonable limit.

In listening to discussions regarding systems of soliciting funds we hear these terms used, "selling the hospital to the public," "advertising the hospital," "making the public hospital conscious" and other trite phrases stressing the hospital as the center of interest.

Are we right in this? Is this the best way of stimulating the generosity of givers? Is "putting over the hospital idea" the most potent appeal?

I am convinced that we talk too much about the hospital and too little about the sick.

Why not reverse the method of approach. Put the idea of the hospital in the background and the ideal of the patient to the fore. Ask for money for the sick and destitute. Cultivate the conception of service to the sick and the poor, referring to the hospital as lightly as possible and then only incidentally as the kindest, most economical and most efficient way of accomplishing the best in care and the surest in cure.

## *"I Hate the Hospital," She Said*

In interpreting the hospital's contribution to the cause refrain from overpraise of our own institution, for modern advertising has disgusted us with superlatives. Explain the general principles of hospital standards and control before we attempt to convince our hearers that our hospital lives up to or exceeds these standards. I believe that much will be gained by adopting a generous attitude toward other hospitals, modestly admitting that ours is a little the worthier.

Recently a woman who had refused a contribution to a hospital stated in an interview, "I hate the hospital, I won't give one cent to it, and I tell others not to." She had some years previously experienced discourtesy in the hospital and since that time had apparently taken every opportunity to discredit its service. I argued, "You hate the hos-

pital for a reason you consider good and sufficient. Do you hate the sick and the poor? Do you desire them to suffer from lack of care, that you may enjoy a revenge on the hospital which, after all, as an organization, has not harmed you? Can't you see that the discourtesy you suffered was the fault of an individual who was probably punished for it and that at the time you condemned her there were several hundred other individuals in the hospital service who were blessed by other patients for the good they did? When some member of your household does something you do not like do you hate your home, talk about it to your neighbors and refuse forevermore to help in the duties of home?

## *Show How Hospital Helps People*

"After all, what has your hatred accomplished, you may observe that the hospital goes on, it is greatly enlarged in size and service, it has grown in the esteem of the community. Your attitude has harmed nobody but the helpless, your lack of support has prevented just so much good being done for some poor unfortunate. You may still contribute without wounding your pride, without giving where you suffered injustice. The fault occurred while you were on private service. We don't need your money there. Let me take you into one of our public wards, where you may talk to those who are in need and who cannot pay. If you find these unfortunates satisfied with what we are doing for them and happy in the belief that they are receiving the best, then select one case and pay his hospital bill.

"I am glad of this interview because you have taught me something of great value. You have shown that we were to blame not only for your unfortunate experience but in some measure for your attitude regarding us. Something in environment, association or atmosphere during your contact with us impressed the hospital upon your consciousness as an organization rather than as a service."

First convince people of our present worth to them. Show them how it is they who suffer, rather than us, from lack of adequate support.



# Editorials



## Group Hospitalization Terminology

THE rapid development of interest in group payment for hospital care suggests the desirability of a uniform terminology to describe the essential feature of these plans. At the present time such expressions are used as group hospitalization, group insurance, hospital insurance, voluntary hospital insurance, cooperative hospital care insurance.

In striving to arrive at the appropriate terminology, let us first seek some common factor in the various plans. They are all about as follows: One or more hospitals agree to provide, when necessary, certain specified services to members of groups, each one of whom contributes a regular equal amount. On the one hand, each potential patient participates with the group in financing the hospital service to the members in need of such care. On the other hand, the hospitals agree to provide service when necessary, and to rely exclusively upon payments by the group as reimbursement for service to individuals.

The term "group hospitalization" appears to describe the basic features of all plans. It emphasizes the essential procedure, "group" action of the individuals, in making their regular and equal payments. Likewise it directs attention to "hospitalization" as the sole or primary objective of such schemes.

"Group hospitalization," as a standard term also has the advantage of omitting the word "insurance" from the title. To be sure, group payment for hospital service applies the principle of spreading the burden and reducing the financial hazards of sickness. But in popular language the term "insurance" brings to mind the large proprietary life and property insurance companies, whose services have not been considered necessary or appropriate in group payment for hospital service.

Another argument against the use of the word "insurance" is the possibility of confusion with plans which would require the payment of money benefits by the responsible persons. The hospitals assume no responsibility to make cash payments of any amount; their obligation is simply to render certain specified types and amounts of hospital service. Likewise the hospitals are not guaranteed payment of any definite monetary sum; they are merely guaranteed the receipt of all monies paid in by the persons eligible for "hospitalization."

The term "subscriber" is suggested as an appropriate designation for the individuals paying the fixed monthly, quarterly or annual "subscriptions." The word subscriber avoids the legal and popular confusion which might arise from such a term as "policyholder." Likewise it is less formal than such an expression as "member," implying, as the latter does, a permanent connection. The individual "subscriber" remains eligible for "hospitalization" only so long as he pays his subscriptions. He does not become a permanent member of an organization which assumes responsibility for his medical care.

The terms "group hospitalization" and "subscriber" are submitted to the hospital world as appropriate for general use. They are broad enough to be applied to plans that differ in detail. A "group hospitalization" plan may involve one or several hospitals; it may accept individuals or merely groups of employed subscribers; it may include or exclude family members; it may be promoted by a hospital, a nonprofit corporation or by a proprietary organization.

In every plan, however, there exists the idea of a "group" of "subscribers" purchasing "hospitalization" through equal periodic "subscription" to a common fund. The fund, in turn, is payable to the participating hospitals regardless of the amount of service required from them. The distribution is made in proportion to the amounts of hospital service provided by the respective institutions.

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## International Methods and Results

AT THE recent postgraduate course on hospital technique that was conducted under the auspices of the International Hospital Association at the University Hospital, Frankfurt, Germany, during the first week of October, American industry, American efficiency and American technique were emphasized to show what hospitals can do with problems that are essentially similar everywhere. It is a pity that distance (and the depression) kept away so many who would have been glad to enroll for these sessions. Many administrators came, however, to learn what their colleagues were doing in other countries with situations that were alike though the language and some of the costumes were different.

For a sum equivalent to about one dollar a day members were permitted to enroll for sessions conducted by the best men that the association could assemble. "These lectures are organized," said the announcement, "in accordance with the principle that professors should learn while they teach and

that students should teach while they learn." The "lessons" lasted forty-five minutes each and were followed by discussions, demonstrations and visits. The topics were well selected and timely. Hospital lighting, ventilation, sterilization and disinfection took up the sessions of the first day. The second day was given over to nursing problems, while the standardization of hospital administration and the supervision exercised in internal management occupied the sessions of the third day. Physiotherapy had its place, dietetic service, problems of the laundry and of infected linen, the management of x-ray and radium, "errors in hospital construction" and, finally, the preventive aspects of hospital work were included.

The more important papers presented will doubtless be published and the American administrator who is interested may well look forward to a stimulating visit if he will plan to attend the third congress of the International Hospital Association, which is scheduled to take place in Belgium during the first week in July.

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### Forewarned Is Forearmed

THE sensationalist is fond of referring to the fact that an aroused public, awakening from a lethargy of abused lack of understanding, is now demanding of the hospital lowered sickness costs. Were one to heed the raucous cries of false prophets one would unquestioningly believe that the hospital has in the past profited at every opportunity in selling service to the sick; that the hard earned dollars of a community have been foolishly, if not dishonestly spent or that somewhere there has accumulated a princely sum of money representing the profits of hospital administration. How grossly false are such insinuations and how cruel to becloud the issue with untrue statements which benefit only the one who has copy for sale.

But somewhere such scandalous reports have a semblance of a foundation. Daily thousands of patients enter the country's hospitals for treatment without any definite idea as to the dimensions of the bill they are about to incur. They know not at all about the method of fixing hospital rates. There are many who presuppose that the fee of the physician is included in that for the private room. Special charges are to them not even a name and the expense necessary to a skilled x-ray study is wholly unknown to them.

Little wonder that when a bill of a hundred or more dollars for one week's hospital study and treatment is presented to the unsophisticated patient, he is first shocked, then resentful and finally

suspicious of the institution's fair dealing. He is likely to feel that he has been duped, that somehow, somewhere, foul play has transpired. It is the business, the plain duty of the hospital management to provide in an attractive form a circular of information setting forth the room and laboratory rates, the hours for visitors, the charges for nurses and drugs and all other such pertinent information of interest to the newcomer.

To be sure, the referring physician should have supplied this information when the visit to the hospital was being discussed, but such frank forewarning is rarely performed by the doctor. The prospective patient, having made financial preparations for eventual major expenditures, is less inclined to protest a hospital bill than if his first information comes when it is too late to turn back. It is a surprising fact that relatively few hospitals have prepared for circulation what may be considered tactful, attractive and informative booklets containing such information.

To lower hospital costs to an irreducible minimum is only an act of fairness to a financially distressed community. To fail to inform its members of the probable cost of a hospital treatment is both unfair and unbusinesslike. To do both is to confound carping critics and to conform to the best traditions of institutional management.

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### Is the Contribution of the Grading Committee Complete?

NONE will deny that the work of the Committee on the Grading of Nursing Schools has been conducted with vigor, intelligence and thoroughness. Moreover, as a result of this survey there has been accumulated a vast fund of information relative to the nursing and patient situation in this country which could not have been made available otherwise.

During the past four years the danger of the overproduction of graduate nurses has been stressed in the reports of this committee. The effect on the individual nurses and on the profession as a whole of a superabundance of graduates has been pointed out as a warning that fewer pupils should be received for training in existing schools or that some schools now functioning should cease to exist.

The implication that fewer nurses of all grades of competency are needed to meet community needs may or may not be justifiable. But this appears to be proved—many schools exist that should cease receiving young women for training, because they are assuming educational obligations that they can



not and do not adequately meet. To cease stressing the menace of overproduction and to demand that all schools meet certain acceptable pedagogic standards would appear a reasonable procedure. Such a policy if supported by national nursing associations and state boards of nursing examiners would help solve the problem of overproduction.

Moreover, if the grading committee closes its books without attempting to delineate for the guidance of training schools its idea of acceptable educational standards, it will be a great disappointment to many and will in a measure serve to vitiate the practical good that one naturally expects to follow such an expensive and time consuming survey. Facts are fine and columns of figures intrigue but an acumination of such data by the laying down of some form of nursing school standards, whether idealistic or but minimum in their scope, would serve to protect the great army of nursing probationers knocking at the hospital door for admission, by discouraging the bad and upholding the hands of the good school. The professional and lay public confidently awaits the publication of the conclusions and the recommendations of this splendid committee.

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### Are Masks Necessary?

**A** VISIT to the average operating clinic will reveal a great variety of costumes. In some operating clinics surgeons will be seen with their caps resting at a jaunty angle on their heads, in the style affected by the chef. Masks are worn for the apparent purpose of protecting the operative wound from mouth germs, but no precaution is taken to cover the nasal apertures. Why the discrimination against oral streptococci? Are nasal germs so harmless and so benign that droplet infection from this source is not dangerous?

When asked to explain the apparent inconsistency of this practice, the temperamental surgeon replies that the nose may not be covered because if it is glasses become so clouded that proper vision is impossible. It is suspected that in many such cases the surgeon's comfort, instead of the patient's safety, has been made the matter of first consideration. If it can be proved that masks add no factor of safety to the patient, let them be discarded. If it has been satisfactorily established that infection can take place as a result of droplet contamination of a wound by nasal as well as oral secretions, then hospital authorities should require that masks be worn in the proper manner.

The comfort and the convenience of the surgeon are of no importance compared to the patient's safety.

### Costly Duplication

**A** LUSTY proclamation by trustees or superintendents that no other institution of merit equal to their own is to be found throughout the length and breadth of the land is only praiseworthy to the extent that at least the ultimate of service is being sought. Such an attitude often is the evidence of the most pitiable provincialism. To prefer the architecture of the town hall of the hamlet of one's birth to the stately proportions of the nation's Capitol may reflect either a lack of travel or a warped sense of the fitness of things. A false institutional loyalty often appears no less ludicrous.

It is often an evidence of the existence of an exaggerated self-pride that prompts hospitals persistently to refuse to recognize their place in the social plan of the community. There is no secret process concerned in ministering to the sick. The administrative and professional practices are largely identical in whatever institution they are found. Those procedures in which one hospital excels, another may perform less efficiently only to offset this deficiency by some other type of superior service. But because of a false belief in the necessity for complete autonomy, the hospital persists in duplicating an expensive service for the performance of which another a few blocks distant is amply equipped.

The existence of a laundry, a laboratory and a power plant for every institution seems to represent undisputed evidence of an unwillingness to concede that a community responsibility should supersede any desire to be wholly autonomous. There is no more opportune time than the present for the careful consideration of group activities of the type suggested. If the urge for the adoption of cooperative purchasing, laundering, heating and lighting under favorable conditions does not come from within the hospital field, it will surely be pressed by the public.

That practical difficulties will be encountered in working out any such scheme must be granted. That in many instances the location of the hospital will prevent the application of such a principle to any great degree is freely conceded. But in urban and even in the hospitals in smaller centers of population much money could often be saved and efficiency not at all diminished if hospital heads would forget personalities and remember the original purpose of the community institution—healing and prevention.

Duplication is costly. Cooperation between hospitals or even the amalgamation of hospitals is but an act of justice to both the patient and the contributor.



## Practical Administrative Problems:

# Caring for Psychotic and Delirious Patients

IN THE January issue there was discussed in this department the emergency treatment of poisonings as carried out in the accident ward of the hospital. Especial reference was made to toxicoses that result from an attempt at self-destruction. It was pointed out that it is foolish to save life by promptly administering a chemical or physiologic antidote to poison only to expose the patient again to the danger of self-destruction by careless ward care following his admission to the hospital.

Usually no general hospital possesses facilities adequate for the lengthy treatment of those who are definitely and chronically mentally ill. This is hardly to be expected. On the other hand, the internist and the neurologist of the general hospital staff are more and more referring to the hospital for a thorough study patients who occupy a borderline place in the classification of mental and physical diseases. Indeed mental and physical diseases are often one and the same condition from an etiologic standpoint, the former merely representing a syndrome indicating the presence of the latter.

### *Need for a "Halfway House" Is Pressing*

The modern neurologist is not content to rest from his labors after a name has been assigned to certain signs of mental aberration. Indeed as our knowledge of disease increases, there appears a greater need for the existence of an institution midway between a general hospital and the hospital for the chronic mental patient, where early or borderline cases may be admitted for study without the stigma of mental illness being attached thereto. At present in many urban centers, there are only three types of institutions to which patients suspected of being mentally ill may be referred—the psychopathic division of the city hospital or an institution frankly catering to mental illness or, perhaps, a private sanitarium or rest house where study facilities are usually placed second in importance to those necessary for custodial care.

There are, however, many patients who would profit by a more or less lengthy stay in a general hospital during which time intensive diagnostic

methods could be applied. In addition to this group there are not a few patients who while under treatment for some medical or surgical condition develop evidences of mental aberration which while frequently transient, often give promise of lasting a long time. These cases demand the most careful observation and study. Because interns and nurses serving in a general hospital have few opportunities to observe patients with mental symptoms, such individuals are prone to receive rather unskilled attention and treatment.

### *Precautions That Should Be Taken*

In the general hospital, because of this lack of knowledge on the part of hospital attendants, the lives of psychotic or delirious patients are sometimes endangered because of a failure to recognize and properly interpret threatening symptoms. To be sure, the merest tyro should be able to recognize the presence of a delirium and it requires but slightly greater knowledge and experience to appreciate that an acute hallucinatory or delusional state suggests strongly the presence of definite mental illness.

Hospitals should provide accommodations, even though limited, for the reception of this type of patient. The physical necessities for such a service are few. If the superintendent recognized that one of the most frequent serious accidents that occur in the hospital is the falling or jumping of psychotic or delirious patients from doors or windows, and if, acting on this information, he provided some simple method of screening these apertures, he would be likely to prevent tragic accidents. In addition to such simple precautions, definite instructions should be given members of the hospital family as to the recognition of the signs of mental illness and as to the handling of patients suffering from psychotic states.

Delirium is a transient departure from normal mental equilibrium. It often occurs in the presence of a serious toxemia or because of exhaustion following a prolonged illness. Hence delirium may be seen during the course of an infectious disease such as enteric fever or pneumonia, or it may occur after the acute stage of the illness has passed. It usually takes the form of profound confusion in

which friends and relatives are not recognized, or are recognized for but brief periods, but in which hallucinations and delusions are not always observed. Nevertheless, the acutely delirious patient may display faulty perceptions, these taking the form of either auditory or visual hallucinations. The patient with a high fever frequently becomes delirious and it may be remarked in passing that this condition is prone to develop as night falls, the patient becoming fully lucid again by the next morning.

#### *Too Many Fatal Accidents*

The type of delirium may range from a wildly maniacal state to a simple confusion as to time, place and person. In conditions in which a high grade of toxicity exists, a low muttering delirium is often seen. Particularly in those types of delirium in which the patient is hallucinated is there danger of the sick man or woman leaving his or her bed, wandering down hospital corridors and falling or leaping from windows, doors or down stair or elevator shafts. A nurse or intern who has had some experience with psychotic states is likely to recognize the presence of a dangerous delirious condition and to safeguard the welfare of the patient by ordering physical restraint or by never leaving the patient alone. Too often does the public press contain reference to a fatal hospital accident which has occurred because a patient in the institution has thrown himself from an unprotected window.

In an Eastern hospital recently, a patient in the eighth day of lobar pneumonia leaped from a first-story ward window, scaled an adjacent fence and was found wandering without shoes in a public thoroughfare on a snowy wintry night. Fortunately this patient was quickly returned to bed and convalesced uneventfully. All similar accidents do not terminate in such a fortunate manner. There is something intangible and yet definite in the appearance and behavior of the hallucinated patient that quickly attracts the attention of a trained person. A certain sudden shifting of the eyes, an alert listening attitude, an expression of fear on the countenance, these to the experienced spell danger.

#### *Methods of Restraint Are Simple*

In delirious states the treatment usually consists of the application of the proper type of restraint and the administration of remedies aimed at reducing the toxicity of the patient. Even such a simple matter as the proper application of restraints is most clumsily done in the average general hospital. Indeed in many institutions no type of equipment is known except the crude leather

wristlets and anklets which are so terrifying to both patient and relatives. Only this type of restraint is necessary in the case of the most violent patient. Shoulder restraint brought about by the use of a rolled or folded sheet so applied as not to compress the chest of the patient is a useful method. Ordinary sheet restraint or a muslin restraint in which padded muslin strips are used usually is adequate in caring for the senile. In the practical nursing course offered at every school for nurses, the preparation of muslin and other restraints and their proper application cannot be too carefully taught.

Certain toxic psychoses are frequently observed in patients being treated in a general hospital. Perhaps the commonest of these is observed in the acute or chronic alcoholic. It is a well known fact that certain types of delirium develop in those who have been accustomed to the daily ingestion of greater or smaller amounts of alcohol but who have been deprived of this drug for some reason for a period of some hours or days. Acute alcoholic delirium or delirium with tremor (delirium tremens) is not infrequently seen in medical and surgical hospital wards. It has been fairly definitely concluded that this state develops in the surgical patient not only because of the absence of the usual dose of alcohol, but also because of certain traumatic factors concerned in bringing the patient to the hospital. Moreover, it is believed that the administration of alcohol at the proper time is likely to prevent the development of this condition.

#### *Hallucinated Patient Is Serious Problem*

The patient suffering with alcoholic delirium is acutely hallucinated both from an auditory and a visual standpoint. Visual hallucinations, however, are most frequently observed. He sees the most terrifying sights and displays on every line of his countenance the greatest fear. The common lay belief that the patient with alcoholic delirium always sees reptiles is erroneous. Because of this fear, the patient with this type of acute delirium is prone to leap from his bed and to rush madly from the hospital, endeavoring to escape from the terrors that confront him. Hospital nurses and physicians who have not observed this condition usually fail to recognize the potential dangers inherent in this state. When hallucinosis develops, active treatment is not only indicated but adequate restraint is imperative. The mortality from alcoholic delirium ranges from 30 to 75 per cent and when the danger of death from pneumonia is superadded, but few are fortunate enough to survive.

The variance in mortality statistics as gleaned



from the medical literature can be almost certainly ascribed to the great divergence in the methods of treatment employed. Without casting reflections on the therapeutics practiced in the hospitals in this country, it may be said that the first thought that enters the mind of the young physician in the presence of an active delirium is to order an injection of morphine. This often is the worst step that could be taken. "*Morphinae verboten*" is the slogan that should be inscribed above the doors of wards in which delirious patients are treated.

#### *Cold or Warm Packs Are Helpful*

In institutions possessing an adequate physical therapy department, the continuous bath is an excellent therapeutic measure in handling these conditions. When this facility is not available, a life-saving measure is the use of cold or warm packs administered in the same manner as is the hot pack so commonly employed in the treatment of certain nephritic conditions. Restraint is often necessary in the alcoholic delirious patient during the early hours or days of treatment, but this should be mercifully applied and frequently removed for the inspection of damage to the patient's body. It should be no more radically restrictive than is required by the physical activity of the sick one. Spinal puncture is a useful procedure but it can be practiced only with difficulty, it must be admitted, in the case of a patient who is wildly delirious.

There are other alcoholic states that are sometimes encountered in a general hospital. An acute delusional psychosis in which the patient frequently entertains fixed ideas of marital infidelity represents a rather dangerous mental state. Perhaps from the standpoint of possible hospital accidents but two common types of mental illness are likely to arouse definite homicidal tendencies—the alcoholic delusional condition and certain post-epileptic conditions. Indeed, generally speaking, in all psychoses suicidal tendencies are more likely to be present than those that endanger the lives of others.

#### *Certain Drugs Produce Delirium*

Perhaps too uncommon to justify extended mention, but enumerated in this sketch for the sake of completeness, are mental conditions associated with morphinism and cocainism. The acutely intoxicated cocain addict sometimes appears in the hospital accident ward and once seen will never fail to be recognized, because of the flight of his ideas and the excessive mental and physical activity displayed by him. The inexperienced intern or nurse sometimes forgets that certain of the

drugs commonly employed in the treatment of disease are capable of producing delirium. Particular reference is made to poisoning by members of the belladonna group. Hyoscine and atropine delirium are sometimes observed and have been, strange as it may seem, mistaken for an acute mental disease. Of course, after the withdrawal of these agents, the clouded mental state quickly clears and this result at the same time of course confirms the diagnosis.

At times in the surgical ward of the hospital an acute maniacal outbreak occurs in a thyrotoxic patient. This condition sometimes develops before operation, and occasionally follows surgical treatment. The tranquility of the average hospital rapidly disintegrates in the presence of such a patient. This, as has been intimated, is true not only because of the lack of facilities for handling psychotic individuals but also and particularly because of the total lack of experience possessed by the institution's medical attendants. Death is likely to be hastened in this condition by the usual application of physical and drug restraint. An already poisoned heart muscle cannot long resist depressive therapeutic measures or the fatigue incident to combating physical restraint.

#### *Have a Strong Tendency to Wander*

Not infrequently mental conditions dependent upon definite cerebral deterioration are observed. This is particularly true in certain arteriosclerotic states or in the so-called senile dementia. In these conditions definite evidence of mental decay is often noted, with the presence of a confusional delirium. Such patients usually in the sixth decade or occasionally even younger may be brought to the hospital for the relief of some acute surgical or medical condition. They are difficult to keep in bed, as they attempt to leave for home or on some fancied errand. They are likely to be incontinent and unclean, noisy at night and somnolent throughout most of the day. They have a strong tendency to wander, and this type of patient sometimes is discovered during the late hours of the night on the streets at a greater or lesser distance from his home unable to give any information as to his identity. Such patients are rarely definitely suicidal and the damage that may be done to their persons is frequently brought about by their falling from high places. Due to the lack of physical strength, such a mental patient is usually not difficult to control physically. However, not a little skill is necessary in caring for such a patient. Attention to detail in feeding, the care of bowels and bladder and the prevention of bed sores and bronchopneumonia are here basic nursing needs. Hydrotherapy is of little use and direct



restraint is often dangerous in the care of the senile dement.

The great majority of the patients who are received in the hospital accident ward following an attempt at self-destruction are of the type possessing a temporary mental depression or a real melancholia. This melancholic state may be but a phase of the so-called manic depressive mental illness, in which periods of mental exaltation alternate with those of depression. Frequently this state follows or accompanies exhaustive physical illness. It is usually characterized by delusions of fear, of persecution or of self-accusation. Loss of appetite and a tendency to rapid fatigue are commonly observed. Often a highly religious trend of thought is associated with this state. To the eye of an experienced nurse or doctor, the facial expression which so eloquently tells of the patient's abject despair and desire to cease to live, is sufficient to establish the diagnosis.

#### *When the Patient Means What He Says*

Otherwise keen house physicians sometimes overlook an intimation on the part of the patient that he intends self-destruction, only to awaken to the potentiality of danger when a tragic occurrence has transpired. There is always an intimation of the possibility of an attempt at self-destruction either in the appearance or the words of the patient at some time prior to the actual occurrence. The difficulty lies in the obtuseness of attendants who refuse to believe that the patient is in earnest. Many lives could have been saved if the truth of the latter statement had been recognized. It is questionable whether any suicide actually takes place without the presence of a real mental illness and yet there are a few instances in which it seems that a momentary overwhelming impulse to perform this act has led to self-destruction. A few moments before this rash deed is committed the patient often seems to be perfectly responsible in every way.

#### *Display Great Cunning*

Once such a state is recognized, the treatment should consist in safeguarding the patient through every moment of the day and night. In some cases of chronic melancholia, the patient develops a craftiness that often entirely deceives the doctor and nurse. The cunning by which medical attendants are sent from the room on an apparently bona fide errand, or which makes possible the possession of lethal instruments or drugs, has often been remarked by those experienced in handling suicidal states. Once the presence of a chronic mental illness has been recognized, and particularly if this condition is likely to require prolonged

treatment, the hospital authorities should promptly arrange for the transfer of the patient to the proper institution. Legal commitment papers are routinely necessary and it is wise for the young physician to acquaint himself early with the procedure necessary for the permanent placement of such patients.

#### *An Act of Criminal Negligence*

Physicians and nurses often display an improper attitude in the presence of the psychotic patient. To agree with the details of a fixed delusion is harmless to the patient and to the ethical soul of the doctor. Amusement should never be displayed nor should an attempt be made to convince a patient that his beliefs are incorrect. To endeavor to deceive such a patient by placing medicine in the patient's food is usually an improper method. The keeping of proper records, the frequent inspection of the patient's body for abrasions or bruises, particularly when he is physically active, are necessary procedures. It approaches an act of criminal negligence for the nurse carelessly to leave on the bedside table of the patient containers of antiseptic and other harmful drugs.

#### *Mental Illness Complicates Care of Patient*

Nurses and physicians in handling psychopathic or delirious patients must remember that the care of the bowels and bladder in this type of individual is a vastly more important task than in the case of lucid patients. The accomplishment of ordinary ward medical surgery, such as venipuncture, lumbar puncture, the administration of intravenous medication, the administration of enemas and douches and the performance of catheterizations, are all procedures greatly complicated by the presence of mental illness.

Finally, it may be said that it would be a splendid thing for the average general hospital, if for only a brief period, an opportunity could be secured for nurses and physicians to observe and participate in the care of the psychotic. The remarkable difference between the self-confidence and usefulness of the nurse trained in an institution where these patients are accepted and of the general hospital trained nurse, when brought face to face with delirium or mental illness in private nursing, has been observed on many occasions. Moreover, it is the hospital's duty when training interns and nurses to give them such a well rounded experience that they will be able to care effectively for patients suffering with mental as well as physical ailments.

In a subsequent number of THE MODERN HOSPITAL other emergencies affecting the physical welfare of the patient will be discussed.

## Maintenance, Operation and Equipment:

# Standardizing the Preparation of Distilled Water

By FRANKLIN C. McLEAN, M.D.

Formerly Director, University of Chicago Clinics, Chicago

THE importance of proper precautions in the preparation of distilled water, and its proper handling in the making of solutions for use in intravenous therapy, have been previously emphasized in *THE MODERN HOSPITAL*.<sup>1</sup> With the constantly increasing demands for such solutions the supply of an adequate amount of distilled water of a purity sufficient to meet the exacting needs of intravenous therapy becomes of first-rate importance to the administrative officers of every hospital. I have previously called attention to this problem, as well as to its solution, and desire to offer some additional observations.<sup>2</sup>

No such thing as absolutely pure water has ever been prepared. Distilled water of varying degrees of approximate purity may be produced by expert chemists to meet varying needs, and the needs of chemists in this respect may require a degree of purity in excess of that required in hospitals for intravenous therapy. Granted an expert chemist, and adequate checks and safeguards applied to every sample of water to be used in a hospital, the apparatus to be used in its preparation would be of secondary importance, but since the average hospital cannot employ an expert chemist for this purpose, and since even the largest hospital need not, it becomes of vital importance to have the needed checks and safeguards built into the apparatus to be used, so that the human factor may insofar as possible be eliminated.

### *Standardization Is Needed*

An analogy with the process of sterilization of dressings and instruments may be drawn at this point. The methods of sterilization used in modern hospitals have become so standardized as to be practically automatic in operation and they depend to the slightest possible degree upon the vagaries of the individual who operates the equipment. Consequently breakdowns in sterilization technique are rare as compared with the days before stand-

ardization was achieved and they may be easily avoided by relatively slight supervision. On the other hand, preparation of distilled water, the requirements for which are at least as exacting as those for sterilization, has not arrived at the same degree of standardization in hospital practice, and consequently methods of preparation that bring good results only in skilled hands are being used by inadequately trained personnel, with the result that in many instances the product cannot be considered safe for intravenous use.

### *The Hospital's Requirements*

It is well known that most solutions intended for intravenous use deteriorate with time. Consequently solutions which must be kept ready for immediate use in case of emergency must be frequently discarded and replaced with fresh solutions. Unless an easily available source of distilled water is provided the constant tendency is to keep solutions too long, with results that may be worse than if fresh even if less pure water were to be used for frequent replenishment of solutions. The more difficult distilled water is to prepare, and the more labor required in its preparation, the less likely it is to be on hand when needed.

The needs of the hospital with respect to distilled water may be stated as follows: (1) The water must always be fresh; (2) it must be easily and instantly available; (3) it must be free from bacterial contamination; (4) it must require the minimum of labor and the minimum of skill for its preparation; (5) it must always conform to the exacting needs of intravenous therapy.

These needs require both continuity and standardization of the process used in the preparation of distilled water for hospital use, and call for a procedure as nearly automatic as possible, but unfortunately these conditions are at present met adequately in relatively few hospitals.

The most exacting standard for distilled water in modern hospital practice is that it be suitable for intravenous use. Unfortunately this standard is one for which there is no chemical test, and the

<sup>1</sup>Perkins, A. H., Preventing Dangerous Reactions in Intravenous Therapy, *THE MODERN HOSPITAL*, Feb., 1932, p. 69.

<sup>2</sup>McLenn, Franklin C., Standardizing Distilled Water Practice in the Hospital, *THE MODERN HOSPITAL*, Oct., 1929, p. 92.

final test is therefore as to whether the water used does or does not, in the presence of conditions otherwise favorable, produce reactions in patients.

The reactions caused by the intravenous injection of water were studied exhaustively by Seibert<sup>1</sup> some years ago, who came to the conclusion that these reactions are usually due to bacterial products contaminating the water. She found that the insertion of a simple trap in the distilling apparatus, similar to the trap used in ordinary Kjeldahl

particles is sufficient. His method, however, leaves too much to the human factor for ordinary hospital use. Perkins uses double distillation as an added factor of safety. Most careful clinicians insist on triple distillation. Our own experience is that a single distillation with any apparatus now available is not an adequate safeguard unless there is exercised a degree of skill and supervision not practicable in the usual hospital, and we prefer to insist upon at least double and preferably triple distillation, the latter especially in communities where the source of water is richly contaminated with organic matter.

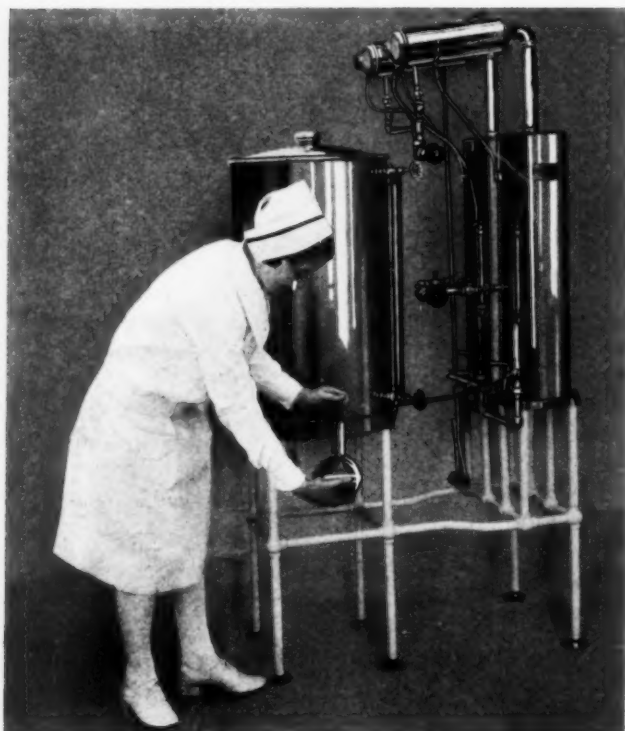
#### *Value of Triple Distillation Is Known*

In any case, since triple distillation can now be carried out with the same degree of automaticity as single or double distillation, and at little additional cost, since clinical opinion is still overwhelmingly in its favor, and since it adds an additional factor of safety built into the apparatus we advocate standardization at this level, with the burden of proof upon those who believe that comparable results may be as easily and as continuously maintained with the single or double process. The fact that there is no simple test of the suitability of given samples of water for intravenous use is simply an additional reason for a standardized procedure known to give satisfactory results over long periods of time.

#### *The Best Type of Still*

As stated above the primary requisite of any apparatus to be used is that it should prevent the entrainment and carrying over of suspended particles. Seibert accomplished this in an ordinary glass distillation apparatus by the insertion of a simple trap. Rademaker uses a single still with an elaborate type of baffle. The stills which we use are provided with a simple plate baffle and are otherwise designed to ensure minimum entrainment. In our opinion a practically automatic triple still, with simple safeguards built into the apparatus, is far preferable to any complicated apparatus which requires skillful handling, for reasons as stated above, and our own experience with this type of apparatus has abundantly justified this point of view.

Likewise we consider the question of a vertical *versus* horizontal condenser as of secondary importance. Perkins favors the vertical type of condenser. In my earlier article I specified that the horizontal condenser which we use should be adjusted to run "hot," that is, that a small amount of steam should be allowed continuously to escape from the tip of the condenser. This serves the double purpose of preventing the formation of an



*This picture shows the type of water distillation outfit used at the University of Chicago Clinics.*

distillations was sufficient to prevent the entrainment and carrying over of these substances into this distillate and that reactions were correspondingly eliminated. Her work has since received confirmation by Rademaker and others, and it is now generally accepted that freedom from suspended particles and dissolved bacterial products, carried over in distillation by entrainment in steam is the first requisite of water intended for intravenous use.

The main purpose, therefore, of insisting upon more than one distillation is to render assurance doubly sure. As Rademaker<sup>2</sup> has recently shown, confirming the experience of others, a single distillation in safe hands and with an apparatus designed to prevent the entrainment of suspended

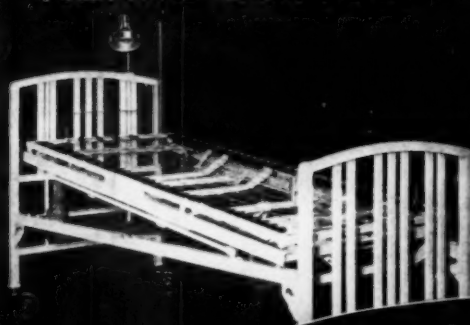
<sup>1</sup>Seibert, Florence B., Fever-Producing Substances Found in Some Distilled Waters. *Am. Jour. Physiol.*, 1923, vol. 67, pp. 90-104; The Cause of Many Febrile Reactions Following Intravenous Injections. *Am. Jour. Physiol.*, 1925, vol. 71, pp. 621-651.

<sup>2</sup>Rademaker, Lee, The Cause and Elimination of Reactions After Intravenous Infusions, *Annals of Surgery*, 1930, vol. 92, pp. 195-201.



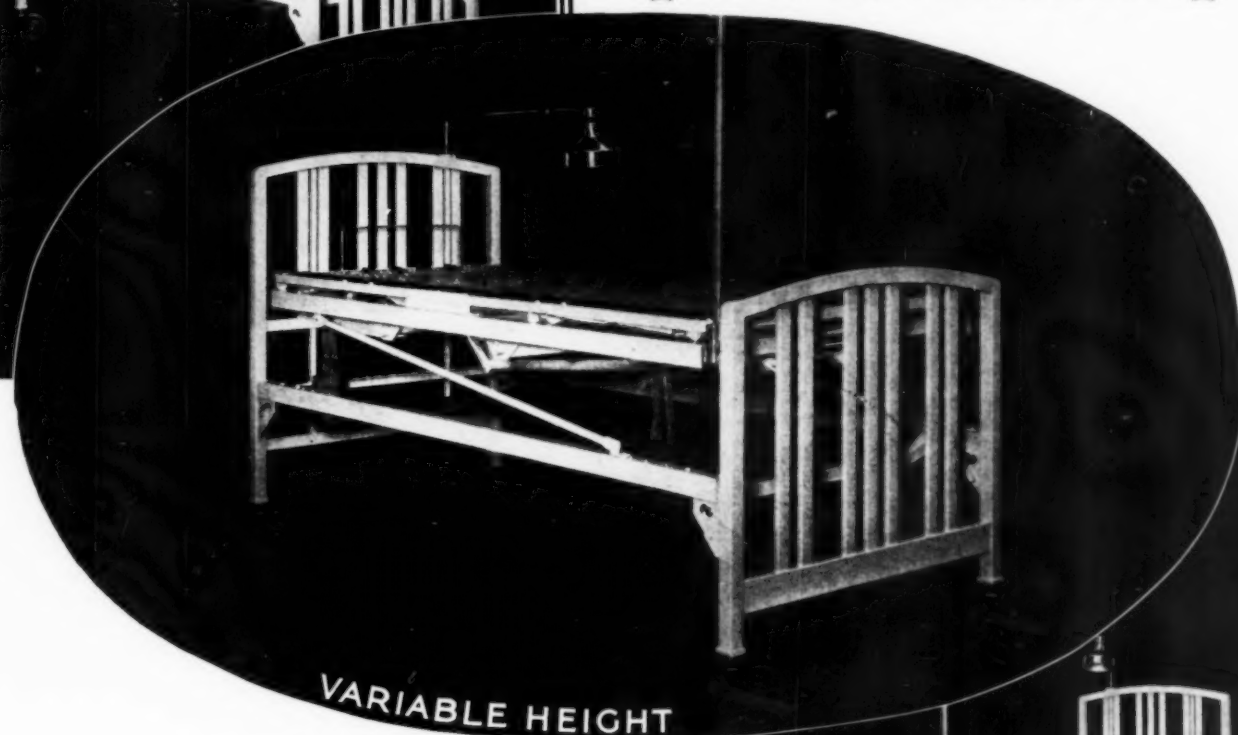
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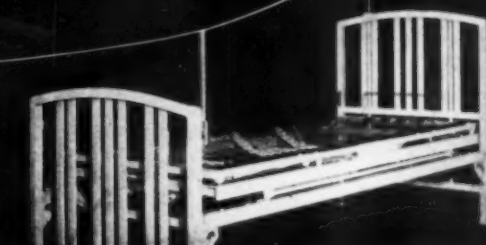
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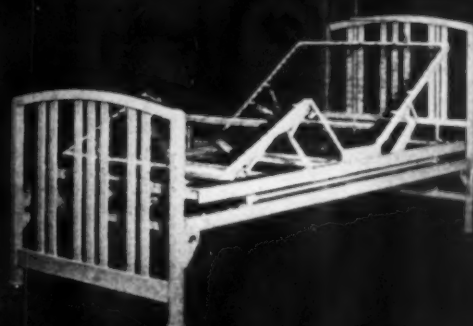
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TABLE SHOWING COMPARATIVE ANALYSES OF DISTILLED WATER

	Single Stills		Type "Q"*	Triple Still		
	Vertical Condenser	Horizontal Condenser		Horizontal Condensers		
	Parts per 100,000	Parts per 100,000		1st stage Parts per 100,000	2nd stage Parts per 100,000	3rd stage Parts per 100,000
Total solids	0.41	0.39	0.39	0.22	0.39	0.29
Volatile solids	0.25	0.28	0.31	0.15	0.34	0.24
Inorganic solids	0.16	0.11	0.08	0.07	0.05	0.05
Nitrogen as						
Free ammonia	0.0073	0.0044	0.0073	0.0010	0.0002	0.0004
Albuminoid ammonia	0.0024	0.0007	0.0012	0.0002	0.0002	0.0010
Nitrites	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Nitrates	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Chlorine, Cl	0.00	0.00	0.00	0.00	0.00	0.00

\*The Type Q still has an elaborate "Spanish prison" type of baffle and a horizontal condenser.

air pocket and, perhaps more important, of allowing the more volatile substances in the steam to escape into the air.

Unfortunately the analyses given by Perkins are not referred to any standard, so that they are not capable of interpretation. If they refer to "parts per 100,000," the system of notation commonly employed, they indicate a degree of purity that we have never encountered.

#### *Analyses Give Little Direct Information*

Chemical analyses of distilled water are of interest in indicating the relative efficiency of various types of apparatus, and in showing gross contamination of supposedly distilled water. Granted reasonable purity, however, such analyses give relatively little direct information as to the suitability of any particular sample of water, for the reason that such analyses give no information as to whether particles capable of producing reactions are suspended or dissolved in the water as analyzed.

The accompanying table shows comparative analyses of distilled water, all these analyses having been made by a disinterested testing laboratory. These analyses show no essential differences in the quality of the water distilled in various types of apparatus. In the samples drawn from a triple still at each of the stages of distillation the analyses show an apparent difference in favor of the first stage. These differences, however, as is the case in all the differences shown in the table, are within the limits of analytical error, and are not significant. It will be noted that all of these analyses show appreciable amounts of impurities, and that they differ therein from the analyses reported by Perkins. In our experience these traces of impurities can never be eliminated entirely, and can be approximately eliminated only by the more elaborate methods used in the preparation of "conductivity water," a pro-

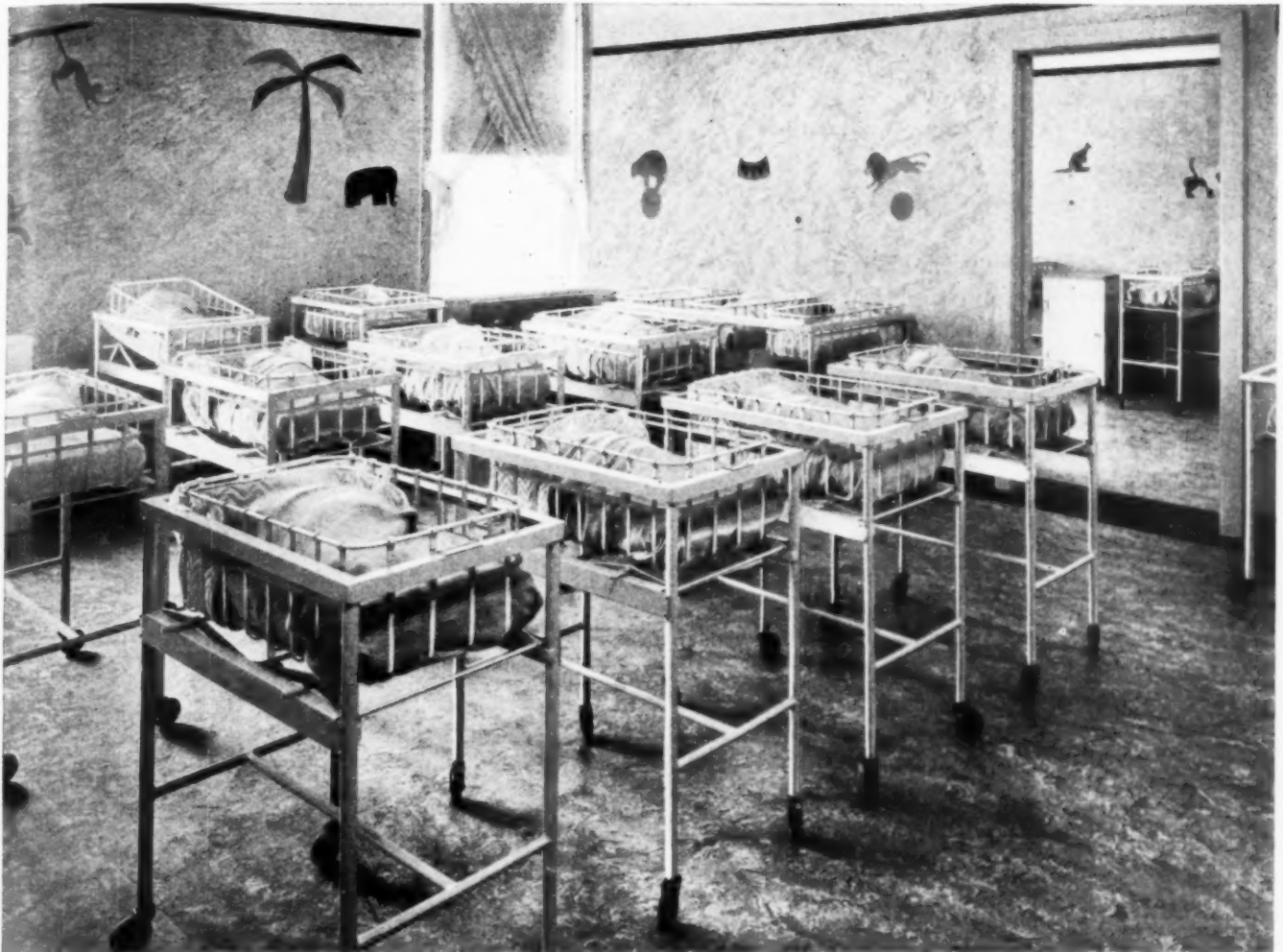
cedure neither necessary nor desirable for hospital use.

Rademaker has called attention to variations in hydrogen ion concentration as possible sources of reactions. Since distilled water is not a buffered solution an extremely minute amount of acid or alkali causes large changes in the hydrogen ion concentration, and for the same reason wide variations in hydrogen ion concentration are instantly corrected when the water enters the blood. For this reason the hydrogen ion concentration of samples of distilled water is of little value in indicating their suitability for intravenous use, except as it may indicate contamination of the water by such substances as may disturb an otherwise neutral reaction. In this connection it must also be noted that any sample of distilled water left in contact with atmospheric air quickly increases in acidity, due to the dissolving of carbon dioxide from the air.

#### *Human Factor Should Be Eliminated*

It is our conclusion that the needs of the modern hospital require a process for the continuous and automatic delivery of distilled water of a degree of purity adequate for intravenous use, and that this requires standardization of technique comparable to the standards of sterilization practice already in common use, with the safeguards built into the apparatus, so that the human factor is insofar as possible eliminated.

Such an apparatus was installed in the University of Chicago Clinics in 1929, and has given continuous and dependable service since that time. This apparatus was described in *THE MODERN HOSPITAL* for October, 1929, with directions for its operation. It requires a minimum of attention and meets all of the needs of the hospital and its laboratories at a minimum of expense beyond that of the first installation.



A cheerful nursery in St. Mary's Hospital, Detroit, Mich., with amusing animal insets on a primrose yellow background of Sealex Wall-Covering. On the floor, Sealex Linoleum richly marbled in many tones of brown. Architect: F. J. Winter, Detroit.

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## New Apparatus Produces Artificial Fever Quickly and Easily

By J. M. BERRIS, M.D.

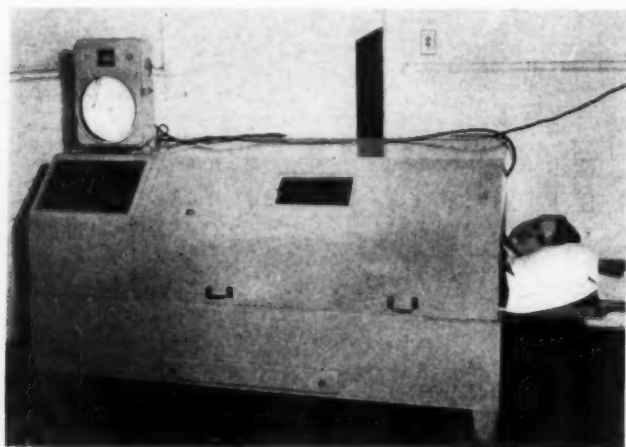
Detroit

**A** NEW apparatus for the production and control of hyperthermia has just been developed. Ease of operation, minimum of discomfort to the patient and comparatively rapid elevation of body temperature during treatment are some of the advantages of the apparatus. No electrical contacts are attached to the patient, and the danger of electrical burns is eliminated. The patient is perfectly free to move his body or his extremities.

The apparatus consists of a cabinet and couch, a vaporizer and heating element and a control mechanism.

The cabinet and couch are constructed of veneer woods, with a dead air space for insulation. There is a removable rubber stretcher upon which the patient reclines during treatment, with only the head exposed. The patient's body is screened from the outside atmosphere by a rubber curtain fitted around the shoulders. A sliding metal shutter in the side of the cabinet allows inspection of the patient's body during treatment. The interior of the cabinet is provided with an electric light for inspection purposes.

Underneath the stretcher there is a metal lined reflector that contains a long electric heating element. A trough, which is filled with water, rests



*The patient reclines upon a removable rubber stretcher during treatment, and is free to move his body.*

on this heating element. When the heating element is in operation the water in the trough is vaporized, which thus humidifies the cabinet atmosphere.

The control mechanism consists of: (1) a panel containing a thermostat for recording the cabinet temperature, a main switch for setting the mech-

anism in operation and a secondary switch for limiting the cabinet temperature; (2) a recording body temperature controller, and (3) a rectal thermostat in the form of a small, metal, gas expansion chamber that is connected to the controller by means of a flexible cable.

The method and technique of production of hyperthermia is as follows: The patient is placed in the cabinet nude, the rectal thermostat is put in position and the height to which the body temperature is to be elevated is set by the indicator on the control. The clockwork mechanism of the



*This shows the interior of the cabinet, which is fitted with an electric light for inspection purposes.*

chart on the face of the control is set in operation, which provides constant reading and recording of body temperature. The main switch is then closed. When the cabinet temperature reaches 130° F., two-thirds of the heating element is automatically cut out and this level of cabinet temperature is automatically maintained, unless the secondary switch is opened. With the secondary switch open levels of cabinet temperature up to 160° F. may be used.

### *Clinical Results Are Promising*

After the onset of diaphoresis, which begins in about five minutes after treatment is started, the body temperature begins to rise. Elevations of from three to four degrees usually occur in from thirty to fifty minutes. Higher levels take a correspondingly longer time. After he is removed from the cabinet the patient is kept wrapped in blankets and heat is applied to his trunk and extremities in order to sustain the body temperature.

This method is being used at Grace Hospital, Detroit, for the treatment of arthritis, intractable asthma, paresis, peripheral vascular disease and the parkinsonism of chronic encephalitis. It has yielded some promising clinical results in this institution.

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## DIETETICS AND INSTITUTIONAL FOOD SERVICE

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# Comparing Costs of Metabolic Diets

By JANET E. SMITH

and

HELEN B. ANDERSON

Scripps Metabolic Clinic, La Jolla, Calif.

THE cost of illness should include not only the medical care, the drugs and the impaired earning power of the patient but also the cost of the patient's diet. In this paper the comparative costs of various metabolic diets are shown, and an attempt is made to interpret the variation of cost from the normal diet. The material found in the literature on this subject is practically negligible.

The absolute standardization of menus and prices is impossible, and yet, since all the menus of this paper were planned by the same person—by modifying the normal diet to meet the requirements of the various metabolic diets—and since the prices were also computed by the same person—the general tendency for variation in the cost seems logical.

Before the diets were planned formulas from numerous books and various doctors were compiled and from this collection a formula that seemed typical for each disease was made out on which to build an average cost American diet. This idea of cost is naturally a matter of personal opinion. The diets were planned and prices were obtained from a national chain store. Household quantities, not institutional, were used. The prices of various commodities may seem particularly high or low and yet these same prices are used in practically all the diets so the general cost tendency is constant. This collection of menus and prices might soon be changed in another country, climate or season. The personal idiosyncracies of certain patients also vary the cost.

The sugar intake from the sugar bowl, that is, sugar not used in actual cookery, is ignored both in caloric intake and cost. It is true that the amount

TYPICAL NORMAL DIET					
Food	Grams	Pro.	Fat	Cho.	Cost
Orange Juice	200	..	..	24	\$0.0440
Rice crispies	15	1	..	11	.0117
Cream	50	2	10	3	.0308
Canned apricots	100	1	..	30	.0212
Poached egg (1)	..	7	6	..	.0300
Toast	60	8	..	36	.0109
Butter	15	..	13	..	.0108
Honey	30	..	..	23	.0108
		19	29	127	\$0.1702
Canned pear	100	1	..	20	\$0.0841
Cottage cheese	50	11	1	2	.0330
Mayonnaise	10	..	9	..	.0330
Milk	150	5	6	8	.0211
Purée peas	30	2	..	5	.0093
Bread	30	3	..	17	.0052
Crackers	15	2	..	10	.0063
Butter	10	..	9	..	.0072
Fresh pineapple	100	1	..	10	.0440
Jelly	20	..	..	15	.0160
		25	25	87	\$0.2292
Escalloped potatoes					
Potato	100	2	..	18	\$0.0035
Milk	25	1	1	1	.0035
Butter	5	..	4	..	.0036
Brussels sprouts	100	1	..	3	.0330
Peas	100	7	..	17	.0312
Salad					
Canned peach	33	..	..	7	.0085
Canned pear	33	1	..	6	.0187
Banana	33	..	..	7	.0073
Mayonnaise	15	..	13	..	.0045
Bread	30	3	..	17	.0052
Butter	20	..	17	..	.0144
Brown Betty	100	2	5	43	.0224
Hard sauce	10	..	3	7	.0030
		17	43	126	\$0.1589
Daily totals		61	97	340	\$0.5583
Total calories.....	2,477				





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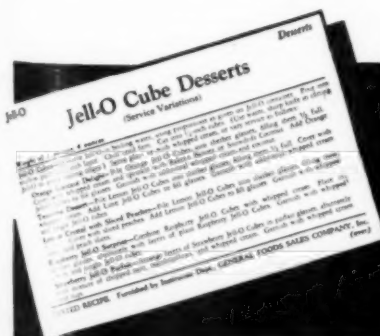
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TYPICAL DIABETIC DIET					
Food	Grams	Pro.	Fat	Cho.	Cost
Milk	150	5	6	8	\$0.0211
Cream	50	2	10	3	.0308
Wheat cereal	20	2	..	15	.0066
Oranges	140	1	..	14	.0308
Scrambled egg (1)	..	7	6	..	.0300
Bacon, crisp	10	3	1	..	.0264
Butter	10	..	9	..	.0072
		20	33	40	\$0.1529
Cheese soufflé	100	10	18	7	\$0.0360
Stewed tomato	100	1	..	3	.0202
Waldorf salad	100	3	6	8	.0270
Fresh baked pear with saccharine	100	1	..	14	.0440
Buttermilk	150	5	2	8	.0165
Butter	8	..	7	..	.0165
		20	33	40	\$0.1475
Chicken a-la-king	95	13	13	3	\$0.1360
String beans	100	2	..	5	.0220
Carrots	100	1	..	9	.0145
Diabetic fruit gelatin salad	75	2	..	3	.0240
Mayonnaise	10	..	9	..	.0030
Diabetic applesauce	75	1	..	15	.0110
Wholewheat bread	10	1	..	5	.0176
Butter	14	..	12	..	.0101
		20	34	40	\$0.2382
Daily totals		60	100	120	\$0.5386
Total calories.....1,620					

used may add materially to both items but to judge the amount used is not practical because of the variation of individual tastes.

The recipes used are those of the Scripps Metabolic Clinic, La Jolla, Calif., or slight variations of these recipes.

The cost of all these diets is perhaps a little high, since the cost of each serving was computed, rather than the total used by the patient or even the family for one week. In most cases the shrinkage of meat was considered as 50 per cent.

The accompanying list shows the average daily

COSTS OF METABOLIC DIETS		
Name of the Diet	Cost per 100 Calories	Average Daily Cost
Normal diet	\$0.0223	\$0.5574
Diabetic	.0329	.5333
Obesity	.0482	.4825
Cardiac	.0241	.4821
Undernutrition	.0225	.7876
Nephrosis	.0302	.7551
Nutritional anemia	.0390	.7813
Pernicious anemia	.0425	1.0622

cost of various metabolic diets. The cost in 100 calories is also shown.

An attempt will be made to interpret the variation in cost of metabolic diets from the normal diet.

The formula for a normal active person of 60 kilograms was taken as 60 grams of protein—1 gram of protein per kilogram of body weight, ac-

cording to Sherman's protein standard—115 grams of fat and 310 grams of carbohydrate. This yields 2,500 calories. In all diets thought was given to ensure sufficient vitamins, minerals and bulk.

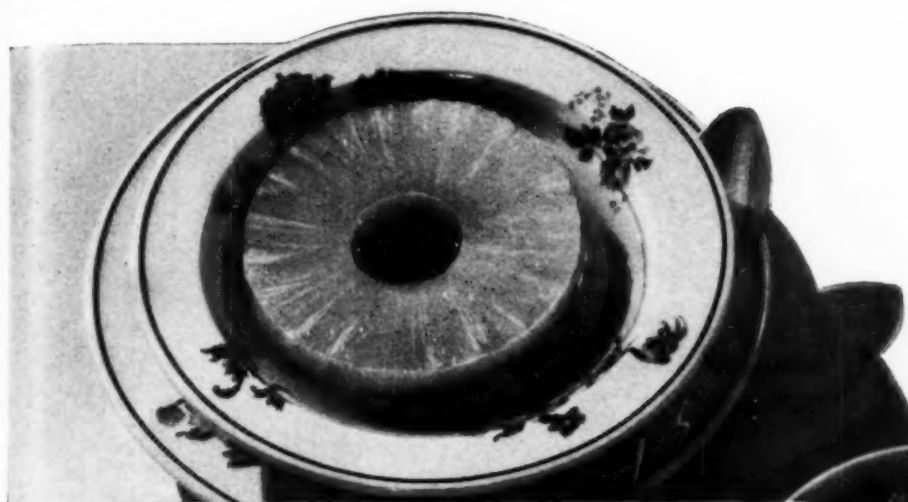
Compare the diabetic diet, of the formula 60 grams of protein, 100 grams of fat and 120 grams of carbohydrate, with the normal diet. The cost of the diets per day is similar but the caloric intake between the two varies about 900 calories. This is due to several factors. The diabetic is believed to be in better health when slightly underweight. Also the diabetic needs fewer calories for he is often less active than the normal individual. Therefore, comparing the cost of 100 calorie portions we find that the diabetic diet costs \$0.0329 while the normal diet costs only \$0.0223. This variation is due to the fact that the diabetic cannot take his carbohydrate from inexpensive starches or highly concentrated sweets but must take it from low per cent fruits and vegetables which are either fresh or specially canned without sugar. In the diabetic diet protein is the most costly nutritional necessity.

The cost of 100 calories of the obesity diet is \$0.0482, as compared with the \$0.0223 in the nor-

TYPICAL PERNICIOUS ANEMIA DIET					
Food	Grams	Pro.	Fat	Cho.	Cost
Milk	50	2	2	3	\$0.0070
Oatmeal	20	3	1	13	.0042
Poached egg (1)	..	7	6	..	.0030
Canned pear	150	2	..	30	.0841
Toast	60	8	..	36	.0109
Kidney	100	17	3	..	.0701
Butter	5	..	4	..	.0036
Orange juice	200	..	..	24	.0440
		39	16	106	\$0.2469
Cold lamb	100	23	20	..	\$0.1101
Rutabaga	150	1	..	14	.0330
Rice	20	2	..	16	.0013
Pureé tomato	50	1	..	3	.0101
Bread	30	3	..	17	.0052
Lettuce	66	1	..	2	.0192
Mineral oil dressing	10	..	..	..	.0070
Butter	10	..	9	..	.0072
S. P. cherries	150	1	..	30	.0646
Milk	150	5	6	8	.0211
		37	34	89	\$0.2788
Liver	100	23	4	..	\$0.3303
Bacon	10	3	1	..	.0264
Onions	125	2	..	13	.0247
Asparagus	100	1	..	3	.0660
Steamed potato	150	3	..	27	.0052
Melba toast	20	3	..	15	.0070
Perfection salad	100	2	..	4	.0254
Mayonnaise	10	..	9	..	.0030
Tapioca cream	100	5	6	16	.0254
with apricot pureé	50	1	..	15	.0106
Butter	20	..	17	..	.0145
		43	37	93	\$0.5384
Daily totals		119	87	288	\$1.0641
Total calories.....2,411					

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Your patients  
will enjoy it  
most with

So many important  
health values have been  
discovered in Canned  
Pineapple that dietetic  
authorities are advising:  
"Eat it daily". . . .



YOU'VE probably read of the new discoveries about Canned Pineapple—how it hastens digestion; helps to prevent or correct acidosis; is an excellent source of Vitamins A, B, and C; provides five essential minerals. And you've heard that dietetic authorities advise a daily serving of 2 slices or a Pineapple Cup of crushed.

With such frequent servings, it is important that the pineapple should be of the finest so that patients will get the fullest benefits from it.

In Libby's Sliced Hawaiian Pineapple you get just those slices richest in natural tang and sweetness, loveliest in color, most perfect in shape—the *center slices*.

In Libby's *Crushed* you get the choicest fruit of its kind, delicate in texture, superb in flavor.

*Libby's*  
just the  
center slices!

Both Sliced and Crushed (and Tidbits, too) are packed only a few hours after the full-ripe fruit is cut . . . packed in a syrup of cane sugar and pure pineapple juice.

And these extra values cost you no more than ordinary kinds! So why not see that your patients have the pineapple they will most enjoy? Order Libby's Hawaiian Pineapple from your usual source of supply in regular or large size cans.

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These Libby Foods of finest flavor are now packed in regular and special sizes for institutions:

Red Raspberries  
Tomato Purée  
Corn, Beets  
Hawaiian Pineapple  
California Fruits  
Spinach, Kraut  
Jams, Jellies

Pork and Beans  
Tomato Juice  
Olives, Pickles  
Mustard  
Bouillon Cubes  
Beef Extract

Peas  
Catchup  
Chili Sauce  
Salmon  
Evaporated Milk  
Mince Meat

Boneless Chicken  
Stringless Beans  
Santa Clara Prunes  
in Syrup  
Strawberries  
Loganberries  
California Asparagus

LIBBY'S HAWAIIAN PINEAPPLE  
COSTS YOU NO MORE



TYPICAL UNDERNUTRITION DIET					
Food	Grams	Pro.	Fat	Cho.	Cost
Orange juice	200	..	..	24	\$0.0440
Rice crispies	15	2	..	11	.0117
Cream	66	2	13	3	.0410
Canned apricots	100	1	..	30	.0212
Poached egg (1)	..	7	6	..	.0300
Toast	60	8	..	36	.0109
Butter	20	..	17	..	.0145
Honey	30	..	..	23	.0108
Bacon	10	3	1	..	.0264
		22	37	147	\$0.2106
Salad					
Pineapple	100	1	..	36	\$0.0206
Cottage cheese	75	15	1	3	.0495
Mayonnaise	15	..	13	..	.0045
Soup					
Cream	50	2	10	3	.0308
Milk	100	3	4	5	.0141
Pureé peas	30	2	..	5	.0093
Bread	30	3	..	17	.0052
Crackers	20	2	3	13	.0084
Butter	20	..	17	..	.0145
Fresh baked pear	110	1	..	22	.0484
Jelly	30	..	..	23	.0251
Afternoon nourishment					
Milk	100	3	4	5	.0141
Cream	50	2	10	3	.0308
		34	54	135	\$0.2753
Escalloped potatoes					
Potato	100	2	..	18	\$0.0035
Milk	25	1	1	1	.0035
Butter	5	..	4	..	.0036
Brussels sprouts	100	1	..	3	.0330
Peas	100	7	..	17	.0312
Salad					
Canned peach	33	..	..	7	.0085
Canned pear	33	1	..	6	.0187
Banana	33	..	..	7	.0073
Mayonnaise	15	..	13	..	.0045
Bread	30	3	..	17	.0052
Butter	30	..	26	..	.0217
Jam	30	..	..	23	.0215
Brown Betty	100	2	5	43	.0224
Hard sauce	15	..	4	10	.0308
Evening nourishment					
Milk	100	3	4	5	.0141
Cream	50	2	10	3	.0308
		22	67	160	\$0.2603
Daily totals		78	158	422	\$0.7462
Total calories.....3,422					

mal diet. This variation occurs for the same reason as in the diabetic diet. The greater variation is due to a decreased number of calories with the same number of protein grams as in the normal and diabetic diets.

The slight difference in cost of the cardiac diet and the normal diet seems to be due entirely to the greater proportion of carbohydrate to the caloric intake. The proportion of fat to carbohydrate in the two diets is similar but the quantities taken are lower in the cardiac diet. If the caloric intake had been raised to 2,500 calories the cost of the cardiac diet would have been raised and the fat and protein would have remained constant. Carbohydrate is the least expensive food material and

especially the carbohydrate added after the bulky fruit and vegetable need has been met.

The negligible increase in cost of the undernutrition diet over the normal diet can perhaps be explained by several factors. The proportion of both protein and carbohydrate in 100 calories of the undernutrition diet compared with the normal diet is decreased, while the fat is markedly increased. The decrease in cost of the first two items is counterbalanced by the increase in the cost of fat.

The increase in cost of the nephrosis diet (\$0.0302 as compared with \$0.0223 per 100 calories of the normal diet) is due entirely to the greatly increased proportion of protein to the total number of calories with the resulting decrease of the less costly carbohydrate items.

In nutritional anemia the increased proportion of protein in the diet is again a primary factor, but in this diet the high cost of liver also plays a part. In both the nutritional anemia and pernicious anemia diets calves liver was used. Other types of liver might be used satisfactorily resulting in a marked lowering of cost of the diet. The compar-

TYPICAL NEPHROSIS DIET					
Food	Grams	Pro.	Fat	Cho.	Cost
Skimmed milk	200	6	2	10	\$0.0282
Cream	20	1	4	1	.0123
Milk	33	1	1	2	.0037
Bananas	100	1	..	22	.0220
Oatmeal	20	3	1	13	.0042
Eggs (2)	..	14	12	..	.0600
French toast	60	8	..	36	.0109
Egg (½)	..	4	3	..	.0150
Milk	50	2	2	3	.0070
Butter	10	..	8	..	.0072
Syrup (maple)	50	..	..	33	.0209
		40	34	120	\$0.1914
Round steak	100	25	9	..	\$0.0882
Asparagus	100	1	..	3	.0660
Tomato and lettuce	100	1	..	3	.0292
Hard boiled egg (1)	..	7	6	..	.0300
French dressing	10	..	5	..	.0023
Carrots	100	1	..	9	.0145
Bread	30	3	..	17	.0052
Butter	10	..	9	..	.0072
Jam	30	..	..	23	.0073
Brownies	33	3	9	18	.1236
		41	39	73	\$0.3735
Halibut	100	19	5	..	\$0.1000
Baked potato	100	2	..	18	.0035
Turnip	100	1	..	7	.0088
Spinach	100	1	..	3	.0225
Melba toast	20	3	..	15	.0070
Jam	30	..	..	23	.0073
Fruit gelatin	100	2	..	17	.0189
Butter	15	..	13	..	.0108
Arrowroot	10	1	1	8	.0081
Buttermilk	200	6	2	8	.0220
		35	21	99	\$0.2089
Daily totals		116	94	292	\$0.7738
Total calories.....2,478					

*If you want your patient to get all the value of wheat*

## Don't Recommend "Just Any Cereal"

*Only a natural "unskimmed" wheat cereal can provide FULL food value*

WHEN you specify a "wheat cereal" you do so because you want your patient to receive *all* of the valuable nutrition properties which the natural wheat grain contains in such abundance. Yet—unless you specify a particular type of cereal, the patient may choose one which provides only a small fraction of the food value of whole wheat.

Cereals are like milk in one important respect. They must be "unskimmed"\* to provide full food value. When in manufacture any one of the three important parts of the wheat berry is skimmed off, the cereal is deprived of the valuable elements which that part contains.

**Ralston Wheat Cereal is "UNSKIMMED"**  
*It is richer than whole wheat*

Ralston contains the valuable inner bran layers, the endosperm and embryo of whole wheat—*without* the coarse outer bran layers. In addition, it contains two and one-half times the amount of vitamin B—rich embryo normally found in whole wheat. Ralston has not been subjected to vitamin-destroying heat processes.

A supply of Ralston Wheat Cereal samples suitable for distribution among patients, and a Laboratory Research Report, will be sent to you without cost. Fill in coupon and mail today.



### \*Do you know as much about cereals as you do about milk?



CEREALS are like milk in one important respect. To provide full food value both must be "unskimmed." Just as milk is deprived of important elements when cream is skimmed off—wheat cereal is deprived of valuable body-building properties when one or more of the three parts of the wheat grain are skimmed off in manufacture.

These three parts are:

1. **BROWN** (bran) containing generous quantities of phosphorus and iron—proteins of exceptionally good quality.
2. **WHITE** (endosperm) a good source of carbohydrates for warmth and energy.
3. **YELLOW** (embryo) one of the richest sources of the anti-neuritic, appetite-stimulating vitamin B.



**Be sure the cereal you recommend is "unskimmed". Ralston contains the tiny brown, white and yellow particles. It is unskimmed.**

RALSTON PURINA COMPANY  
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Send me materials as offered in your advertisement.

NAME .....

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*This offer limited to residents of the United States*

## TYPICAL OBESITY DIET

Food	Grams	Pro.	Fat	Cho.	Cost
Oranges	100	1	..	10	\$0.0220
Poached egg (1)	..	7	6	..	.0300
on toast	20	2	..	12	.0036
Melba toast	10	2	..	8	.0035
Butter	5	..	4	..	.0036
Bacon, crisp	15	5	2	..	.0369
	17	12	38		\$0.1023
S. P. peach	100	1	..	20	\$0.0254
Cottage cheese	75	15	1	3	.0495
Milk	100	3	4	5	.0141
Purée peas	30	2	..	5	.0093
Crackers	10	1	1	7	.0042
Grapes	50	1	..	10	.0060
String beans	100	2	..	5	.0220
	25	6	55		\$0.1340
Brussels sprouts	100	1	..	3	\$0.0330
Carrots	100	1	..	9	.0145
Esc. eggplant	100	1	4	4	.0600
Melba toast	10	2	..	8	.0350
Deviled egg (1)	..	7	6	..	.0300
Lettuce	50	1	..	2	.0146
Mayonnaise	5	..	4	..	.0015
Fresh pear	100	1	..	14	.0440
Consommé	150	3	..	..	
	17	14	40		\$0.2047
Daily totals		59	32	133	\$0.4410
Total calories.....1,056					

## TYPICAL NUTRITIONAL ANEMIA DIET

Food	Grams	Pro.	Fat	Cho.	Cost
Milk	75	2	3	4	\$0.0105
Shredded wheat	30	3	..	23	.0083
Canned peach	100	1	..	20	.0254
Scrambled egg (1)	..	7	6	..	.0300
Liver	100	23	4	..	.3303
Toast	30	4	..	18	.0054
Butter	15	..	13	..	.0108
Grapefruit juice	150	..	..	9	.0330
	41	16	74		\$0.4537
Sandwiches					
Bread	75	9	..	42	\$0.0132
Butter	10	..	9	..	.0072
Peanut butter	20	6	9	3	.0110
Consommé	150	3	..	..	
Vegetables	50	1	..	3	.0202
Crackers	15	2	..	10	.0063
Grapes	100	1	..	20	.0010
Sliced tomato	100	1	..	3	.0292
Boiled ham	50	10	6	..	.0715
	33	24	81		\$0.1696
Roast lamb	80	18	15	..	\$0.0880
Baked potato	100	2	..	18	.0035
Banana squash	100	1	..	9	.0108
Fruit salad					
Apples	30	..	..	6	.0033
Grapes	30	1	..	6	.0033
Celery	30	..	..	1	.0143
Melba toast	10	2	..	8	.0035
Prune whip	50	2	..	14	.0580
Butter	15	..	13	..	.0108
Mayonnaise	10	..	9	..	.0090
	26	37	62		\$0.1985
Daily totals	100	77	217		\$0.8218
Total calories.....1,961					

## TYPICAL CARDIAC DIET

Food	Grams	Pro.	Fat	Cho.	Cost
Orange juice	150	..	..	18	\$0.0330
Cream	20	1	4	1	.0123
Milk	33	1	1	2	.0037
Wheat cereal	20	2	..	15	.0066
Bacon	10	3	1	..	.0264
Rhubarb	100	1	..	13	.0110
Toast	45	6	..	27	.0082
Butter	10	..	9	..	.0072
Marmalade	30	..	..	23	.0093
	17	16	99		\$0.1177
Cheese soufflé	100	10	18	7	\$0.0360
Canned pear salad	100	1	..	20	.0561
Mayonnaise	5	..	4	..	.0015
Melba toast	10	2	..	8	.0035
Butter	10	..	9	..	.0072
Milk	150	5	6	8	.0242
Applesauce	100	1	..	30	.0120
Stewed tomato	100	1	..	3	.0202
	20	37	76		\$0.1607
Cold chicken	50	14	6	..	\$0.0880
Mashed potato	100	2	6	17	.0090
String beans	100	2	..	5	.0220
Carrots	100	1	..	9	.0145
Fruit gelatin salad	75	2	..	12	.0145
Bread	30	3	..	17	.0052
Butter	15	..	13	..	.0108
Soft custard	100	5	9	13	.0251
	29	34	73		\$0.1891
Daily totals	66	87	248		\$0.4675
Total calories.....2,039					

ative cost of the nutritional anemia diet with the normal diet is as \$0.0390 is to \$0.0223 per 100 calories.

The expense of the pernicious anemia diet is similar to that of the nutritional anemia diet. However the pernicious anemia patient consumes one pound of liver or liver substitute daily while the nutritional anemia patient consumes only one-half pound daily. The cost of the pernicious anemia diet per 100 calories is \$0.0425—\$0.020 higher than the normal diet.

From the evidence brought out in the preceding material it seems that the cost of 100 calories of the normal diet is the more economical. It is true that due to the difference in caloric intake in the eight diets, some menus have a lower average daily cost than the normal. The proportion of protein intake in 100 calories of the various diets seems to be the most important factor in raising the cost. Carbohydrate taken in the form of fresh fruits and vegetables instead of in the form of concentrated sugars and cheaper starches tends to increase the cost, as is shown in the obesity and diabetic diets.

The following diets have been selected as typical for each metabolic disorder listed. No attempt was made to use either very cheap or very expensive menus but rather to follow menus used in the



Besides economy . . .  
these new-found reasons *why*  
**PINEAPPLE-CANNED**

*is advised for  
daily use—*



Quick, easy to prepare, and economical for hospital use. A Pineapple Cup of crushed or tidbits. Or two slices.

RECENT nutritional studies reveal these striking new discoveries about Canned Pineapple.

Already known as a good source of vitamins A, B and C, and as a digestive aid . . . it is now known to be one of our most valuable fruits, from many other angles.

It is shown to possess more essential nutritional values, and to meet more known dietetic needs, than any other fruit similarly studied. Note these new-found values in the panel at the right.

Based upon soundly established tests on human subjects—these

findings demonstrate the importance of Canned Pineapple for daily use. In general and childrens' diets. Also, prepared in various combinations, for some of the restricted, such as anti-constipation, obesity, anemia, and high-caloric diets.

And you will find that, for every portion, the cost is small.

Use Canned Pineapple not only in salads, mousses, with meats. But especially in these two easily prepared, economical forms—for appetizers and desserts. A Pineapple Cup of crushed or tidbits, or a serving of two slices.

### Supplying all these essential values

1. Canned Pineapple is a generous source of vitamins A, B and C.
2. It furnishes the minerals that safeguard against nutritional anemia—iron, copper and manganese. And it supplies notable amounts of calcium and phosphorus.
3. It helps effectively to prevent acidosis by contributing to the normal alkalinity of the blood.
4. Canned Pineapple speeds digestion in the stomach of foods with which it is eaten.
5. It stimulates renal function, increasing the elimination of nitrogenous waste products.

These statements are made only about Canned Pineapple, NOT the raw. The temperatures applied in canning cause a beneficial change of dietetic importance.

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average American home. The following table gives the range of cost for the menus:

<i>Name of Diet</i>	<i>Range of Cost</i>
Normal diet	\$0.4553 to \$0.6724
Diabetic	.4896 to .6458
Obesity	.3724 to .6416
Cardiac	.3965 to .6464
Undernutrition	.6668 to .9260
Nephrosis	.5761 to 1.1273
Nutritional anemia	.4774 to .9223
Pernicious anemia	.8389 to 1.1780

This paper does not deal with one of the most interesting phases of the increase in food cost due to introducing a metabolic dietary procedure into a family group. The following question is often

asked by patients or their relatives, "Can we use this dietary plan for the family?" As all metabolic diets are based on the principles of normal diet with the least possible variation the answer to the question is usually "Yes, but you should add or subtract certain items from the diet as outlined." The resultant increase in the use of protein foods, fruits and vegetables by the entire family is a cost factor that would be difficult to estimate.

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## A Comparison of Food Quality in State Institutions

Following visits to a number of state hospitals and other large public institutions in Massachusetts and New York State, A. L. Bowen, superintendent of charities, Department of Public Welfare of Illinois, concludes that the food for patients in the institutions he visited is better in quality, better prepared and better served than in similar Illinois institutions. In each place that he visited Mr. Bowen examined the raw foods as well as the meals when they were ready for the patients.

Concerning the efficiency of the Eastern institutions that he visited and the lack of efficiency in similar Illinois institutions, he said:

"Worcester State Hospital, Worcester, Mass., excels all of them. Yet, its per capita cost for raw foods is only a trifle higher than that in Illinois institutions.

"There are many reasons for this phenomenon. The meat is better; hence, though it costs more, it is more economical in preparation and serving. Meals are better cooked and more palatable; hence, they are completely consumed. Garbage is not created for the purpose of sustaining a maximum herd of hogs.

"At Worcester the dinner always offers a choice of two meats while there are three vegetables. The patients are served small portions but they may return to the serving counter as often as they wish.

"This institution has worked out the best scullery I have ever seen, requiring fewer persons, smaller space and less time to prepare the vegetables for a meal.

"Another economy is the fact that the food for the patients and for all grades of employees is prepared and served from the same kitchen. The patients' food is as palatable as that served to the officers. Frequently both are served from the same supplies. Nothing is wasted. Bread is cut in uniform thickness, each loaf retaining its form and being set in a container in which it snugly fits. There is no loss of bread and butter. Ingenious methods of handling coffee, milk and tea in large quantities have been worked out.

"The weight of garbage collected after each meal is posted immediately on a bulletin board in the kitchen.

"Another waste often encountered in institutions is the loss of vegetables raised in the gardens. In the Worcester State Hospital excess vegetables are prepared and placed

in freezers. It happens that Worcester is a large city with plenty of freezing facilities. At first, this method of handling vegetables seemed to be a failure but every problem has been solved and the steward assured me that of the last season's pack not a pound has been lost.

"It is necessary to keep the vegetables cold while they are being prepared for delivery into the refrigerator. This has been made possible by the use of ice cold water and cracked ice.

"The frozen food is taken from the refrigerator and immediately is placed in the cookers. It is not thawed before being cooked.

"Dehydration has not been tried in Massachusetts.

"Illinois never has had and has not now a creditable system of food preparation and distribution. Our kitchens have been and are a reflection upon us. Despite all the progress we have made, our institution kitchens still are below proper standards in equipment, care and personnel.

"We have provided, in many instances, more attractive dining rooms than will be found in the average Eastern institutions, but our kitchens and our meals are deficient.

"In Illinois we have been obsessed with the notion that state hospitals and other large public institutions are engaged in hog raising. The larger the herd that an institution has raised, the more credit it has received. It is forgotten, of course, that the swine have been fattened off the expensive food that patients and employees have discarded because it has been so abominably prepared.

"The personnel in our kitchens is not trained. Our civil service requirements for cooks and dietitians are not stiff enough. We are too prone to be satisfied with what we get when we employ cooks. Our compensation for kitchen help is too low. We buy cow meat. Some day Illinois is going to awaken to the economic loss of cow meat. Illinois should make money by buying a better grade of beef, a better grade of coffee, tea and flour, by employing better bakers, and cooks and by enforcing discipline as to cleanliness and orderliness in all kitchens.

"There is no economic problem in the administration of Illinois' charitable and penal institutions that demands more attention and more careful thought than this subject of food, its preparation and distribution. Good as our record has been on reducing the per capita cost of maintaining our institutions, it can be reduced still further by changes in our kitchens and commissaries with a distinct improvement in quality of meals served both patients and employees."

# "We'll get that case record... the photographs will show the actual conditions"

THREE years ago an unusual case was admitted to the hospital. On entrance the patient was photographed. Periodically the progress of the disease and the result of the treatment were recorded with the clinical camera as a routine measure.

Now a similar case is up for discussion. The photographically illustrated record of the previous case becomes invaluable for reference.

When it is necessary to supply information in legal actions, for instruction or publication, or in conferences, graphically illustrated case records prove most decisive. Words tell the treatment, but pictures show the condition and give authentic visual proof of the results.

With the Eastman Clinical Camera Outfit you can provide complete photographic service. It enlarges and reduces.

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## NEWS OF THE MONTH

## Western Hospital Group Will Hold "Economic Convention"

THE program for the 1933 convention of the Western Hospital Association has been especially designed to offer constructive suggestions on economics in all departments of hospital work, particularly suggestions representing efficiency with lowered costs, increased incomes and the maintenance of high standards. The convention will be held at Oakland, Calif., February 22-25.

Dr. B. W. Black, medical director, Highland Hospital, Oakland, president of the association, will preside at the opening session on Wednesday morning. Dr. Malcolm T. MacEachern, director of hospital activities, American College of Surgeons, will discuss emergency measures necessary for immediate consideration by all hospitals. Dr. Philip King Brown will present the majority report of the Committee on the Costs of Medical Care, while the minority report of the committee will be presented by Dr. Edward H. Cary, Dallas, Tex., president, American Medical Association. C. Rufus Rorem, associate for medical services, Julius Rosenwald Fund, Chicago, will discuss the significance of the committee's report to individual hospitals.

On Wednesday afternoon the delegates will visit the U. S. S. *Relief*, the only hospital ship of the United States Navy. A Washington's Birthday educational pageant will follow. This will be in the form of a three-act play. The importance of first aid treatment will be presented by the Boy Scouts of Southern California. Subsequent treatment demonstrations will be given by hospitals and doctors of Long Beach, Calif., with a working model of a hospital receiving room, wards, x-ray and clinical laboratory on the stage.

An entertainment and educational program featuring the value to the public of scientific hospital progress will be held Wednesday evening. This affair will be open to the public.

### *Will Discuss Insurance Problems*

There will be sectional meetings for the dietitians, the record librarians, the executives and the nurses on Thursday morning. A discussion of insurance problems will follow, the subject to be opened by R. W. Nelson, superintendent, Portland Sanitarium and Hospital, and president, Oregon Hospital Association. The discussion will deal with compensation and public liability insurance problems, such as reasonable charges for hospital service in compensation cases, and the collection of hospital bills in automobile accident cases. Lien laws and hospital relations with industrial and group insurance will also be discussed.

Doctor MacEachern will preside at the general assembly on Thursday morning. "Inevitable Changes in the Hospital World" is the topic to be discussed by Dr. George F. Stephens, superintendent, Winnipeg General Hospital,

Winnipeg, Manitoba, Can., and president, American Hospital Association. Doctor Black will speak on "The Relative Responsibility of Voluntary and Tax-Supported Hospitals." Robert Warner, superintendent, Deaconess Hospital, Spokane, Wash., will give some practical suggestions for the economic relief of hospitals.

A symposium on the emergency problems of hospitals will be held Thursday afternoon. Among the subjects to be discussed are: the trend in economic organization of hospitals and medicine; periodic payment plans for hospital care; periodic payment and other plans for medical care.

Sectional meetings for the trustees, the physical therapists, the accountants and the exhibitors will follow.

The annual banquet will be held Thursday evening.

### *Special Session for Social Workers*

The nurses and the social workers will hold separate sectional meetings on Friday morning. There will also be separate sectional meetings on business economics and hospital practices.

Doctor Black will preside at the general assembly on Friday morning, which will deal with economics in all departments of hospital service. The topics to be discussed include: scientific practices and hospital routine; business procedure and finances; necessary legislation; publicity and public relations.

A special session for social workers will open the Friday afternoon program. This will deal with the admission of patients to the hospital.

The general assembly on Friday afternoon will be presided over by Carolyn E. Davis, superintendent, Good Samaritan Hospital, Portland, Ore. Miscellaneous economic problems will be discussed.

The report of the resolutions committee, the report of the nominating committee and the election of officers will follow. Sectional meetings will then be held for the nurses, the dietitians and the record librarians. There will also be a sectional meeting on medical practices.

At a meeting on Saturday morning the newly elected officers will outline the program for the ensuing year.

Preceding the opening general assembly on Wednesday morning there will be a business session, with President Black presiding. In connection with this meeting there will be a flag raising ceremony in recognition of Washington's Birthday.

During the convention, private consultation with an authority will be arranged for any hospital making a request for detailed information upon any subject. All such requests should be mailed to the secretary of the association, 130 South Broadway, Los Angeles, prior to February 15.

# ELI LILLY AND COMPANY

*Founded 1876*

Makers of Medicinal Products



*For Reducing Nasal Congestion*

*Promoting Drainage and Ventilation*

**I**NHALANT Ephedrine Compound, No. 20, contains ephedrine 1 percent, with menthol, camphor, and oil of thyme in a neutral paraffin oil.

Inhalant Ephedrine Plain, No. 21, contains ephedrine 1 percent in an aromatized paraffin oil.

Both inhalants are supplied through the drug trade in one-ounce and pint bottles.

*Prompt Attention Given Professional Inquiries*

PRINCIPAL OFFICES AND LABORATORIES, INDIANAPOLIS, INDIANA

## NEWS OF THE MONTH (Cont'd)

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### Volume on Nursing Completes Medical Education Series

The series of volumes on "Methods and Problems of Medical Education" inaugurated in 1924 by the Rockefeller Foundation, has been brought to a close, for a time at least, with the publication of the twenty-first volume, which is devoted to nursing education and schools of nursing.

The series was undertaken in an effort to bring together in convenient form for the benefit of the medical world, information on all phases of medical education, methods of instruction, experiments in teaching and plans of new medical buildings and hospitals. Each volume in the series has contained a collection of valuable articles relating to some field of medicine, and brief descriptions of clinics, laboratories and methods of teaching in different parts of the world have been included.

The information that has been disseminated through the publication of this series is of a nature to be of great assistance to those planning improvements in buildings, in teaching facilities and in methods in the field of medical education.

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### Two Groups Protest Free Aid to Veterans

Free medical and hospital care to veterans suffering from disabilities not of service origin was opposed at a hearing of the congressional joint committee on veterans' relief laws December 22 by representatives of the American Medical Association and the American Hospital Association.

Both associations went on record against further building of government hospitals for nonservice cases.

The extension of government hospitalization to nonservice connected cases "operates definitely as a disturbing factor in the practice of medicine," Dr. Edward H. Cary, Dallas, Tex., president of the American Medical Association, told the committee.

"We think that the medical profession, which has served the public so long, is in great danger in its future service to the people of this country if the government should continue to build hospitals and continue to disturb that relation which did exist and does now exist between patients and doctors in their home locality."

Dr. N. W. Faxon, Rochester, N. Y., president-elect of the American Hospital Association, stated that the association "would emphatically protest against further expansion of government hospitals."

Doctor Faxon summarized his contention as follows:

"1. The American Hospital Association approves the granting of medical and hospital care to veterans with service connected disabilities, and to veterans with tuberculosis, neuropsychiatric and certain specified diseases whether service connected or not.

"2. It does not approve the granting of free medical and hospital care to veterans with general medical conditions of nonservice origin.

"3. It does not approve of the building of additional government hospitals or any extensive addition of existing hospitals for the care of nonservice connected cases.

"4. In the event that the policy of the granting of free medical care to veterans with nonservice connected disabilities is expanded, a policy that the association does not advocate or desire, such care should be given in civil hospitals."

At an executive session the committee decided to request an extension of time from January 1 to March 3, in which it is to file its report in the House and the Senate.

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### New "Nomenclature of Diseases" Just Off the Press

"A Standard Classified Nomenclature of Diseases" has been compiled by the National Conference on Nomenclature of Disease and has just been published by the Commonwealth Fund, New York City. The book is edited by Dr. H. B. Logie, the executive secretary of the Conference.

As the medical nomenclatures in use throughout the United States for the purpose of recording information concerning morbidity vary widely in form, the widespread use of this authoritative and carefully planned nomenclature cannot but be instrumental in eliminating the use of many faulty and incomplete designations of disease. The system of classification is at the same time topographic and etiologic, that is, each disease is described and classified in terms of the tissue or organ where it is principally manifested and in etiologic terms. Instructions are given in the use of the nomenclature and there is a comprehensive index.

Among the national organizations that have approved either the whole nomenclature or the section with which each is particularly concerned are: American Medical Association, American College of Surgeons, American Hospital Association, Association of American Physicians, American Public Health Association and Association of Record Librarians of North America.

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### Los Angeles Hospital Cuts Size of Nursing School

More economical operation and more efficient service are the dual motives behind a reorganization plan for its school of nursing recently put into effect by the Los Angeles County General Hospital, Los Angeles. Under the new plan the number of student nurses will be cut in half, according to Norman R. Martin, executive superintendent of the hospital.

Los Angeles County General Hospital, an institution of 1,720 beds, has the second largest school of nursing in the country. The institution is about to open a new \$12,000,000 hospital with a normal bed capacity of 2,444 beds and an emergency capacity of 3,600 beds.

The plan is expected to save the county \$250,000 yearly and to create, at no increased expense, positions for 100 graduate nurses.



# Give your Hospital a *Clean Break* for the New Year!

**THE "LYSOL" SPECIAL**  
NO-PROFIT-PRICE TO HOSPITALS  
HOLDS GOOD FOR **1933!**

**N**OW, with its new increased phenol coefficient of 5, "Lysol" is twice as strong as ever before . . . and twice as quick in searching out and killing infectious germs.

The special price to hospitals (without profit to the makers of "Lysol") brings you this 40-year old superior disinfectant at very little more than the price of weaker, less dependable, less efficient substitutes.

Twice as strong in phenol coefficient, "Lysol" cuts to an absolute minimum the cost of hospital disinfection. No longer can you afford the ordinary cresylic preparations which boast only half or less than half of this intensity and which in some cases contain twice as much water as "Lysol."

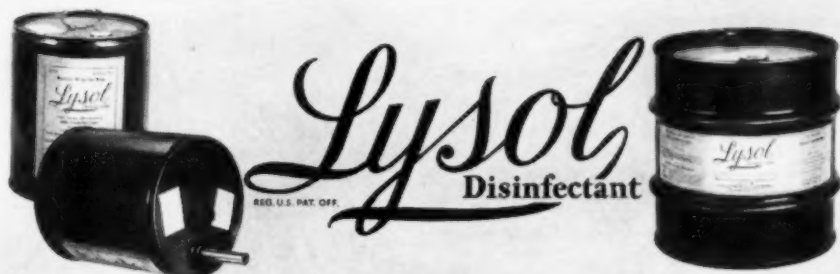
"Lysol" has always been the choice of *leading* hospitals. Now its hospital service can be universal. Get your orders in early. Hospitals are served first. But *first hospital* come is the first hospital served!

Mail the coupon!

# \$1.50

per gallon in 10-gallon lots and still less under the Yearly Purchase Plan

Mail the coupon for complete information and proof why "Lysol" is your best and most economical "buy" for 1933!



LEHN & FINK, Inc., Hospital Dept. 2  
Bloomfield, N. J.

Let us know about your Special Yearly Purchase Plan for "Lysol" disinfectant.

Name and title \_\_\_\_\_

Hospital \_\_\_\_\_

City \_\_\_\_\_ State \_\_\_\_\_

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## NEWS OF THE MONTH (Cont'd)

### Hospital Gives Elementary Course in Physics

An elementary course in physics was started recently at Beth Israel Hospital, New York City. Special reference will be made in the course to the divisions of the subject that have direct application to physical medicine.

The course will continue for four months, with a two-hour session each week. Myron Schwarzschild is in charge of the course.

### Graduate Nurses Volunteer Part-Time Services

Thanks to the private duty nurses among its alumnae, St. Luke's Hospital, Chicago, will be able to reduce the size of its school of nursing even beyond the 50 per cent reduction originally planned by the nursing council committee of the school.

Eighty per cent of the members of the private duty section of St. Luke's Alumnae Association have volunteered to give one month's service to the hospital if necessary. They will be called only if needed and will retain their places on the registry, their services being divided into two-week periods. The hospital will pay no salaries while these nurses are on eight-hour duty, but maintenance will be provided.

"The policy of the hospital will be to increase the graduate staff as rapidly as finances permit," says Ada Reitz Crocker, director of the school. "The volunteer nurses definitely understand that there is no thought of exploiting them. It may not be necessary for them to give volunteer service, but the splendid spirit demonstrated in this matter is an outstanding example of their loyalty to the institution and their fellow nurses." In September, 1931, the school admitted seventy-one students; in September, 1932, only thirty students were admitted.

### Will Advise Public Monthly on Hospital Facilities

The United Hospital Fund, New York City, has just announced the institution of a new information service which will be of importance to the public, to those seeking hospital care, to private contributors to the voluntary hospitals, to public officials and to hospital managements. The hospital information and service bureau of the fund will maintain a record of the exact facilities available to the public in ninety private hospitals of New York City, and also the situation by boroughs. This record will be made public every month.

In explaining the importance of the new service, Dr. E. H. Lewinski-Corwin, director of the bureau said:

"For the first time, it will be possible for the city and borough officials and the public to know the extent to

which hospital facilities are being used and the relative service that various hospital investments are affording the public. Officials will know immediately where overflow cases from municipal hospitals can be placed in emergencies, and whether the demands of various sections of the city are being adequately met.

"Hospital managements contemplating expansion can act with greater assurance and they will be able to determine the necessity for any particular departure on the basis of the general need. The public, knowing what facilities are available, will be able to judge the equity of charges made by different hospitals in the light of supply and demand. This radical departure, which, because of its current information, is as important in the hospital field as current indexes of car loadings and bank clearings are in business, is another evidence of the growing desire on the part of hospital managements to take the public into their confidence and widen their field of service."

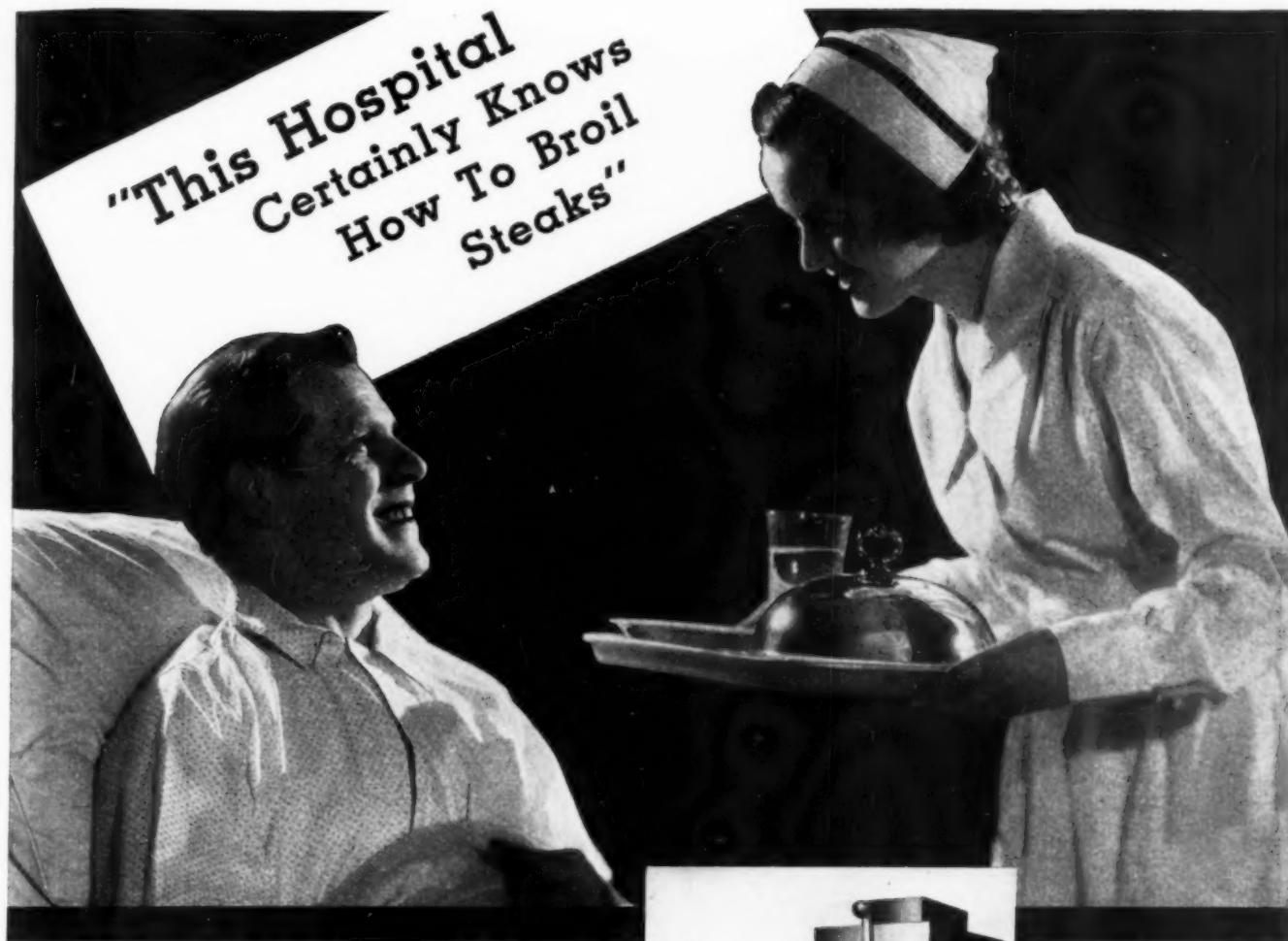
The first of the new reports to be made public shows that for the three months ending December 1 only one-third of the beds in the private patient departments throughout the city were occupied; that two-thirds of the beds in the semiprivate departments were occupied, and that the wards were normally full. The dearth of patients in the private departments was accounted for by the economic situation. Transfers from the wards to the semiprivate rooms, at ward rates, accounted for the greater occupancy of this department, the numbers in the wards being thus kept below the crowding point.

### Chamber of Commerce Advocates Big Cut in Veterans' Relief

The United States Chamber of Commerce recently presented to the Joint Congressional Veterans' Committee recommendations for changes in legislation affecting veterans. Savings estimated at \$400,000,000 could be made through the suggested changes, representatives of the chamber declared. Affirming that adequate provisions for veterans whose service brought them disabilities must be maintained, the chamber's special committee made the following suggestions for savings:

1. Denial of compensation for all disabilities not clearly proved to be service connected.
2. Repeal of legislation granting hospitalization for disabilities not attributable to service.
3. Limiting government insurance "to the purposes for which it was undertaken."
4. Placing compensation paid to dependents on a basis of necessity and service connected disability and death.
5. Returning disabled emergency officers to a disability compensation status.
6. Placing veterans' relief compensation legislation on a scientific basis, with consequent reduction in administrative costs.

The National Economy League, which was represented at the session, made substantially the same recommendations for savings.



**P**ATIENTS praise the flavor of steaks and chops prepared in the new Edison Electric Vertical Broiler. Its ability to sear both sides of the meat simultaneously, sealing in the rich meat juices, makes this automatic broiler ideal for hospital kitchens.

The new Edison Vertical Broiler cuts broiling time in half. Both sides of the meat are cooked at once. The temperature of the broiling chamber is easily adjustable for any type or thickness of steak. No turning . . . No bleeding . . . It's sanitary . . . Economical, too. Get the facts now.

# EDISON

GENERAL ELECTRIC

EDISON GENERAL ELECTRIC APPLIANCE CO., Inc.  
5662 W. Taylor Street, Chicago



VERTICAL BROILER FOR THE  
MAIN KITCHEN

*Two Calrod units sear both sides  
simultaneously.*

## AUTOMATIC EGG BOILER FOR DIET KITCHENS

*Only egg boiler with therm-  
ostatic safety switch—pre-  
venting burn outs. You can  
use your old timer with  
this tank.*



EDISON GENERAL ELECTRIC APPLIANCE CO., INC.  
5662 West Taylor Street, Chicago, Illinois

(check square for information desired)

☐ Please send me complete information on the new Edison ☐ Vertical  
broiler ☐ Egg Boiler

Name.....

Address.....

City..... State.....

WORLD'S OLDEST AND LARGEST MAKERS OF ELECTRIC COOKING EQUIPMENT



## NEWS OF THE MONTH (Cont'd)

### Hospital Wins Court Decision in Auto Accident Case

Paris Hospital, Paris, Ill., was recently granted a judgment in the sum of \$314 and costs against Edgar County in circuit court. The decree was the culmination of a suit in which the hospital sought to collect from the county for medical attention to a patient who was unable to pay. The patient was injured in an automobile accident.

Paris Hospital is an incorporated institution organized under the laws of Illinois as a nonprofit sharing institution.

The suit was first brought against the township where the patient resides. This suit, however, was dropped and a suit brought by the hospital against Edgar County.

"There is a law in Illinois that makes any hospital where surgery is done take such cases and care for them or suffer a heavy fine," the hospital management pointed out in explaining the case. "There is also another law that makes the county, not the township, pay for such services. Any person who is not a pauper, meaning anyone not receiving help from his township supervisor, should he fall sick, be injured or should die, must be given aid by the supervisor of the township and the county must pay the account."

### Coming Meetings

#### American College of Surgeons.

President, Dr. J. Bentley Squier, New York City.

Director general, Dr. Franklin H. Martin, 40 East Erie Street, Chicago.

Next meeting, Chicago, October 9-13.

#### American Hospital Association.

President, Dr. George F. Stephens, Winnipeg General Hospital, Winnipeg, Manitoba, Can.

Executive secretary, Dr. Bert W. Caldwell, 18 East Division Street, Chicago.

Next meeting, Milwaukee, September 11-15.

#### American Protestant Hospital Association.

President, Rev. Thomas A. Hyde, Christ Hospital, Jersey City, N. J.

Executive secretary, Dr. Frank C. English, 3233 Griest Avenue, Cincinnati.

Next meeting, Milwaukee, September 8-11.

#### Annual Congress on Medical Education, Medical Licensure and Hospitals.

Next meeting, Chicago, February 13-14.

#### Arkansas State Hospital Association.

President, Monseigneur John P. Fisher, Director, Catholic Hospitals, Little Rock.

Secretary-Treasurer, T. J. McGinty, Davis Hospital, Pine Bluff.

Next meeting, Hot Springs, April 25-26.

#### Hospital Association of the State of Illinois.

President, J. Dewey Lutes, Ravenswood Hospital, Chicago.

Secretary, E. I. Erickson, Augustana Hospital, Chicago.

Next meeting, Chicago, May 3-5.

#### Indiana Hospital Association.

President, George William Wolf, Lafayette Home Hospital, Lafayette.

Secretary, Gladys Brandt, Cass County Hospital, Logansport.

Next meeting, Chicago, May 3-5.

#### International Hospital Congress.

Next meeting, Knock, Belgium, June 28-July 3.

#### Iowa Hospital Association.

President, Clinton F. Smith, Allen Memorial Hospital, Waterloo.

Secretary, E. C. Pohlman, University Hospital, Iowa City.

Next meeting, Marshalltown, April 19-20.

#### National Methodist Association of Hospitals, Homes and Deaconess Work.

President, Rev. John G. Benson, Methodist Hospital, Indianapolis.

Secretary, G. M. Hanner, Beth-El Hospital, Colorado Springs, Colo.

Next meeting, Indianapolis, Feb. 15-16.

#### New England Hospital Association.

President, Bertha W. Allen, Newton Hospital, Newton, Mass.

Secretary, Dr. Albert G. Engelbach, Massachusetts General Hospital, Boston.

Next meeting, Boston, Feb. 17-18.

#### Ohio Hospital Association.

President, Mary A. Jamieson, Grant Hospital, Columbus.

Secretary, J. R. Mannix, University Hospitals of Cleveland, Cleveland.

Next meeting, Columbus, May 2-4.

#### Pan-American Medical Congress.

President, Dr. Francisco M. Fernandez, Havana, Cuba.

Secretary general, Dr. J. E. Lopez-Silvero, Havana, Cuba.

Next meeting, Dallas, Tex., March 21-25.

#### Hospital Association of Pennsylvania.

President, John M. Smith, Hahnemann Hospital, Philadelphia.

Secretary, Howard E. Bishop, Robert Packer Hospital, Sayre.

Next meeting, Philadelphia, March 21-23.

#### Hospital Association of the State of Texas.

President, Mrs. Alice Taylor, All Saints Hospital, Fort Worth.

Secretary, Joe F. Miller, Jefferson Davis Hospital, Houston.

Next meeting, Dallas, March 17-18.

#### Western Hospital Association.

President, Dr. B. W. Black, Highland Hospital, Oakland, Calif.

Secretary, Lola M. Armstrong, *Western Hospital Review*, Los Angeles.

Next meeting, Long Beach, Calif., Feb. 22-25.

#### Wisconsin Hospital Association.

President, Dr. R. C. Buerki, Wisconsin General Hospital, Madison.

Secretary, George Crownhart, State Medical Society, Madison.

Next meeting, Chicago, May 3-5.

**TO KEEP  
DESIRABLE  
your patients  
expect this soap  
made with  
OLIVE OIL**



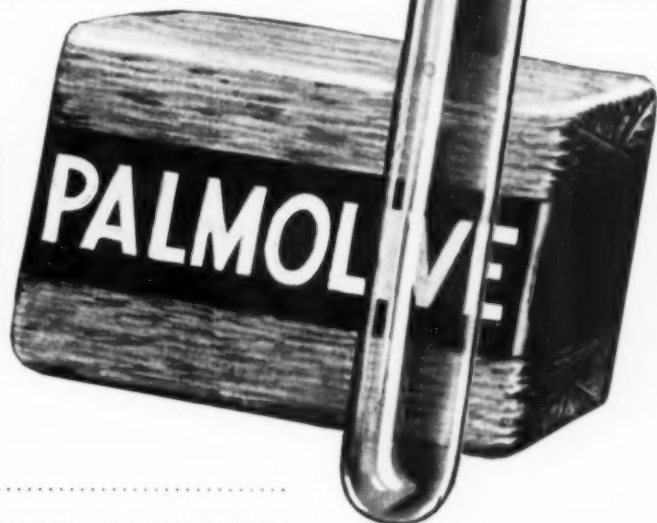
## No Question About Palmolive's Purity

**I**N HOSPITALS, particularly, absolute purity is expected. That is one reason why patients expect Palmolive Soap . . . why they have a right to expect it.

Palmolive is pure! It is made of olive and palm oils — of vegetable oils — no other fats whatsoever. Its green color is the natural green of these oils. To this there has been added no artificial coloring, no heavy masking perfume. In fact Palmolive is the only large-selling soap that tells you

— shows you — what it is made of. See the test tube at the right! In spite of its quality and prestige, Palmolive costs no more than ordinary soaps. Your hospital's name printed on the wrappers on orders for 1,000 cakes or more. Mail coupon for free booklet and prices of Palmolive Soap in the five special sizes for hospitals.

*This much OLIVE OIL goes into each cake of Palmolive*



### SUPER SUDS for hospital laboratory use

Letters from hospital laboratory directors and nurses prove this new bead soap ideal to clean laboratory glassware, hospital instruments, utensils and equipment. *Super Suds* cleans quickly, easily, efficiently. It leaves bottles, slides, everything, bright, clean, sparkling! Mail coupon for complete information.

COLGATE-PALMOLIVE-PEET COMPANY  
Dept. 20 B, Palmolive Building, Chicago

- ☐ Without obligation send me your free booklet, BUILDING CLEANLINESS MAINTENANCE — together with Palmolive Soap prices.  
☐ Send me complete information on Super Suds, the new bead soap.

Name.....Address.....

City.....State.....

**COLGATE-PALMOLIVE-PEET COMPANY, Palmolive Building, Chicago**  
NEW YORK      MILWAUKEE      KANSAS CITY      SAN FRANCISCO      JEFFERSONVILLE, IND

## NEWS OF THE MONTH (Cont'd)

### Suggests Distinguishing Label for Boric Acid

In view of the frequency with which boric acid and saline solution are used in close association, particularly in the care of the newborn, and inasmuch as the physical appearance of both of these two liquids is much the same, it is suggested by Dr. Malcolm T. MacEachern, director of hospital activities, American College of Surgeons, that all hospitals adopt some method of distinguishing between these two solutions so as to eliminate the possibility of accidents. Doctor MacEachern suggests that boric acid solution be labeled in red, "Not for Internal Use."

### Medical Advertising Procedure Described in Report

A pamphlet has just been published by the Julius Rosenwald Fund, Chicago, describing the various types of advertising used by medical and dental societies, public health agencies and similar noncommercial organizations. The material was gathered from all available sources by Mary Ross, New York City.

The report also includes a description of the educational advertising of life insurance companies and some drug houses, a summary of the rules of the American Medical Association affecting advertising by physicians, and the advertising standards set by national organizations of publishers and advertising agencies.

County medical societies in many different states, particularly New York, Florida, New Jersey, Washington and Texas have used paid advertising in the newspapers during recent years; several state societies have experimented with it and the Illinois Medical Society has recently reported in favor of its use. Several dental societies have followed similar lines. Still more prominent has been the use of advertising by public health agencies aiming to control tuberculosis or cancer, according to the report.

Advertising by a public health agency to educate the public as to the dangers of venereal diseases and to cause people to seek competent medical care instead of quack treatment, is illustrated by the work of the Public Health Institute, Chicago. Some prominent hospitals, particularly in Boston, have used newspaper advertising for purposes of public education and to attract the attention of possible contributors to their charitable work. Advertising to induce people to have an annual physical examination has been utilized nationally by the Life Extension Institute, and by the five county medical societies in New York City, cooperating with lay agencies.

The report concludes by offering the following tentative conclusions based on the study:

"The code of ethics of the American Medical Association states that physicians have a responsibility for educating the public in health matters. The advertising campaigns by the medical societies, public health agencies, hospitals and clinics, described in the report, illustrate an effort to

carry out the responsibilities which have thus been assumed by physicians for the education of the public. It is almost universally agreed that advertising by individual physicians is undesirable. The grosser forms of quack advertising seem now to be fairly well under control as the result of the efforts of professional bodies and of the high standards which the better newspapers and periodicals now apply to their advertising columns.

"It is essential to draw a distinction between advertising for public health purposes and advertising conducted with the aim of financial profit. Advertising and other modern methods of publicity for these purposes should be facilitated. Medical organizations, whose code of ethics now recognizes medical advertising in principle, ought to develop policies appropriate to this field and discriminate these from restrictions applicable to individual physicians and to advertising for commercial purposes.

"The conduct of advertising or other forms of publicity by a professional body acting alone suffers from the fact that the motives of the medical men or the intent of their advertising may be misinterpreted as a bid for patients. Health departments, voluntary health agencies or boards of trustees of hospitals or clinics, working in cooperation with a professional group, should be able to reach the public more effectively than could the professional body acting alone. There is much to be said for the principle of joint professional and lay participation in advertising and other publicity on medical matters."

Copies of the report may be obtained without charge from the Julius Rosenwald Fund.

### Hospital Establishes Course in Mental Nursing

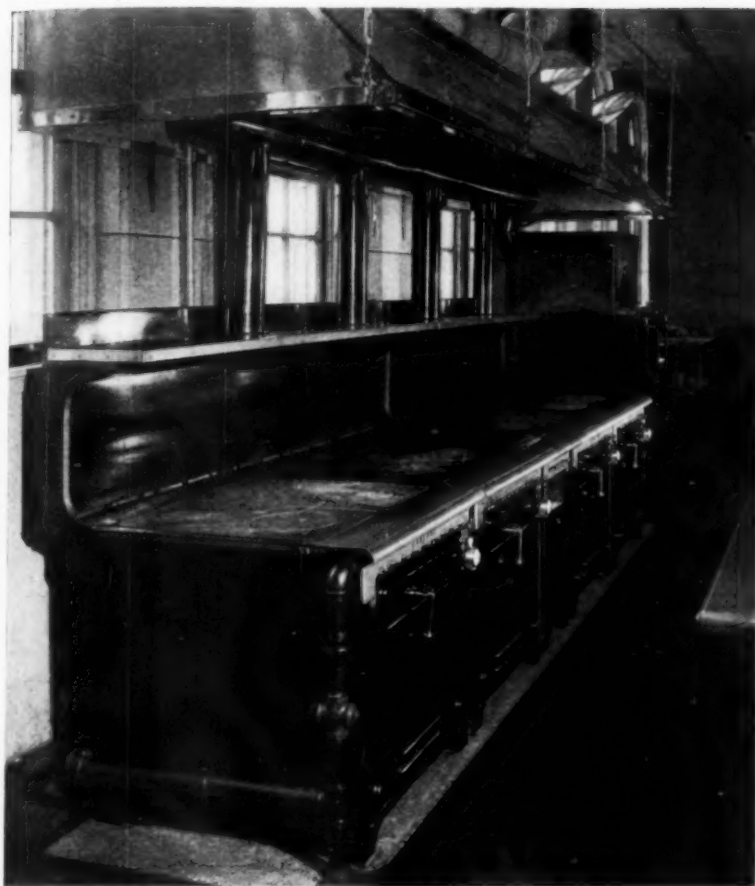
With the start of 1933 Ontario Hospital, Whitby, Ont., established a regular postgraduate course in psychiatric nursing and mental hygiene, as a result of the successful experiment made during 1932. The curriculum, covering a year, gives nine months' practical experience in nursing mental patients in the hospital and the clinic, with visits to outside institutions, such as courts and settlements. Lecture courses and special instruction deal with such topics as psychology, psychiatry, occupational therapy, parent education and child guidance and public health nursing, supplemented by ward clinics, staff conferences and seminars.

### Hospital Receives Large Bequest Under Attorney's Will

The Presbyterian Hospital, New York City, is granted a large bequest under the will of William Cook, prominent corporation lawyer, who died June 4, 1930, according to a transfer tax appraisal filed recently. The hospital receives property at Port Chester, N. Y., valued at \$625,000, a legacy of \$100,000, and personal property valued at \$1,736.

The lea  
heated  
a solid  
with p  
manifo  
cealed.





Kitchen of Milwaukee Sanitarium, Milwaukee.  
Garland Installation by Albert Pick & Company,  
Chicago, Ill.

**Milwaukee Sanitarium  
keeps down expenses  
with**

# **GARLAND**

## **HEAVY DUTY GAS RANGES**



**Garland No. 45-28**

The leader in the Garland line. All hot top, heated by nine single jet burners forming a solid sheet of flame under entire top, with perfect combustion. Smooth front—manifold, hinges and door springs concealed. Enameled oven linings.

Hospitals today must practice every possible economy in order to conform to reduced budgets. A most careful study of kitchen equipment is advisable. It may well be found that outmoded and outworn gas ranges are wasting fuel at a rate sufficient to pay for new equipment that would effect permanent economy. The new Garland heavy duty gas ranges are designed especially for greater economy. Extra heavy insulation with Therminsul keeps heat within the oven doing the work it is paid to do while oven heat control further helps to reduce fuel cost. The economies effected are permanent because Garland heavy duty gas ranges are built to endure. If you face the need for greater economy, write for the Garland catalog.

**Garland Division**

**Detroit-Michigan Stove Company**

**Detroit, Michigan**

Chicago - Dallas - Jersey City - Philadelphia

## NEWS OF THE MONTH (Cont'd)

### Second Edition of Book on Hospitals Is Published

The second edition of "Hospital Organization and Management," by Capt. J. E. Stone, secretary, Birmingham Hospitals Centre, Birmingham, England, has just been published by Faber & Faber, Ltd., London. The first edition of this book was published in 1927, and the second edition presents many new headings, besides bringing the material up-to-date.

There are introductions and forewords to the book by the late Viscount Cave, Lord Onslow and Sir Arthur Stanley.

The book is of particular value to superintendents of hospitals in Canada and the United States in that it gives a complete picture of hospitals and hospital procedures in Great Britain.

Captain Stone is one of the outstanding hospital men of England, having formerly been connected with St. Thomas's Hospital, London, and editor of a British hospital magazine.

### New Medical Center Unit Is Harkness Gift

The Institute of Ophthalmology, the new \$1,500,000 eye division of the Presbyterian Hospital, New York City, was opened to receive patients on January 16. The nine-story building stands at Fort Washington Avenue and 165th Street, on property belonging to the Columbia University Medical Center.

Dr. John M. Wheeler will have charge of the institute, which was built as a result of a gift from Edward S. Harkness. Patients will be cared for by a staff of six interns, thirty nurses and fifteen attending physicians.

### Presbyterian Hospital Celebrates Fiftieth Anniversary

More than 200 members and friends of the women's board of Presbyterian Hospital, Chicago, gathered at the hospital on January 9 for a program marking the opening of the institution's fiftieth anniversary year. Talks were made by Mrs. D. W. Graham, a charter member of the women's board; William A. Douglass, for fifty years secretary of the board of managers; Dr. John A. Robison, a member of the first medical staff, and Dr. James B. Herrick, who told of the progress of medicine and surgery in the past half-century.

It was reported that, including the admissions of that day, 280,489 patients had been hospitalized since the institution first opened, 83,496 of these patients being cared for entirely free. Many others have been treated as out-patients.

Among the other speakers were Mrs. C. Frederick Childs,

a granddaughter of Daniel Jones who, together with his heirs, provided the sum of \$110,000 for the erection of the Daniel Jones building in 1888, and Mrs. W. J. Chalmers. Mrs. Chalmers added more than \$20,000 to the hospital's endowment fund through a series of operatic concerts which she arranged in the 1890's.

The family of the founder of the hospital, Dr. Joseph P. Ross, was represented by Mrs. Frederick T. Haskell, a daughter.

### Hospital Social Workers Will Meet in New Orleans

The American Association of Hospital Social Workers will hold a regional conference in New Orleans, February 11-13, for staff workers in the Southern and certain of the Central states. The sessions of the conference will be held in the various hospitals of the city.

Registration will be at Charity Hospital on Saturday morning, February 11, where the first sessions will be held. The present trends of emphasis on community relationships will be discussed, and the program will include subjects of interest to medical social workers in connection with their relationships to other community agencies. The division of responsibility for community care in health problems will be discussed. One meeting will be held at the new Flint-Goodridge Hospital. Opportunities will be given for small group discussions on special subjects.

Eleanor Brown, secretary, National Society for the Prevention of Blindness, will report on the extension and development of social work in eye clinics. Elizabeth Gardiner, University of Minnesota, president of the American Association of Hospital Social Workers, will report on the work of the association. Kathleen Allen, director of social work, Provident Hospital and Training School, Chicago, will participate in the program.

Beatrice Hodge, director of social work, Charity Hospital, is chairman of the program committee. Plans are being made for visits to the hospitals and other institutions of the city, and also to points of historic interest.

New Orleans, known as the "Crescent City," is one of the most distinctive cities in the United States. Because of its Old World atmosphere, New Orleans is host yearly to thousands of visitors.

### Appointed Successor to Prominent Hospital Consultant

The firm of Henry C. Pelton, architects, 415 Lexington Avenue, New York City, has been appointed, by the executors of the estate, successor to the consulting practice of the late Thomas B. Kidner. Relevant files and data have been transferred to the above address. The Pelton firm, which was established in 1893, has had extensive experience in the hospital field.

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## PERSONALS

DR. DAVID CORCORAN has been appointed superintendent, Central Islip State Hospital, Central Islip, N. Y., succeeding DR. GEORGE A. SMITH, who retired recently because of the statutory age limit. DOCTOR CORCORAN was formerly first assistant physician at the Creedmoor Division, Brooklyn State Hospital, Queens Village, L. I., N. Y.

DR. L. L. CAZENAVETTE, professor of neurology, Tulane University medical school, has been named superintendent, City Hospital for Mental Diseases, New Orleans, to succeed the late DR. H. DASPIT.

LOUIS COOPER LEVY, formerly superintendent, Jewish Hospital, Cincinnati, has been appointed superintendent, Menorah Hospital, Kansas City, Mo., succeeding BERYL B. ANSCOMBE, who was recently married. During the past eight months MR. LEVY has been engaged in consultation work in Montreal, Canada, in helping plan the furnishings, equipment and administration of the new Jewish General Hospital, in that city.

FRANCES R. HICKS was recently appointed superintendent, Community Hospital, Wahoo, Neb.

JESSIE F. DAVIDSON, superintendent, Monongahela Memorial Hospital, New Eagle, Pa., died recently. MISS DAVIDSON had been superintendent of the institution since November 12, 1931. She was forty-six years of age at the time of her death.

DR. CHARLES S. PARKER, acting superintendent, Kings Park State Hospital, Kings Park, N. Y., has been named superintendent of the institution.

LILA J. NAPIER, formerly superintendent of nurses, Lying-in Hospital, New York City, has been appointed in the same capacity at Bronx Hospital, New York City.

MISS JOYCE LONG, formerly assistant superintendent of nurses, Municipal Hospital, Tampa, Fla., has been appointed superintendent, Bartow General Hospital, Bartow, Fla.

DR. R. E. BUSHONG, Milwaukee, Wis., has been named superintendent, Lima State Hospital for the Insane, Lima, Ohio, succeeding the late DR. W. H. VORBEAU. DOCTOR BUSHONG was formerly associated with the Toledo State Hospital, Toledo, Ohio, and the Athens State Hospital, Athens, Ohio.

MARY L. BROADHURST recently became superintendent, King's Daughters' Hospital, Portsmouth, Va. MRS. BROADHURST was previously directress of nurses, Johnston County Hospital, Smithfield, N. C.

DR. H. H. WILSON has assumed the superintendency, Western Oklahoma State Tuberculosis Sanatorium, Clinton, Okla.

EVA MAE BRADBURN, formerly connected with the University Hospital, Baltimore, is now superintendent, Apalachian Hospital, Johnson City, Tenn.

DR. HENRY BARENBLATT is the new superintendent, Deborah Sanatorium, Browns Mills, N. J.

DR. EUGENE A. SCHARFF, who resigned as superintendent, St. Louis County Hospital, Clayton, Mo., due to ill health, died January 11 at St. Louis. DOCTOR SCHARFF served as superintendent, St. Louis City Hospitals, prior to joining St. Louis County Hospital. He was well known to hospital superintendents in all parts of the country. ANNA BRAND has been appointed superintendent of the St. Louis County Hospital to succeed DOCTOR SCHARFF.

CORAL M. PAGE has resigned as superintendent, Lancaster Municipal Hospital, Lancaster, Ohio. FRED A. SWINEHART, assistant superintendent of the institution for the past three years, has been appointed superintendent.

DR. WILLIAM H. WALKER, for many years associated with the Hartford Retreat, Hartford, Conn., has been appointed assistant superintendent of the new Fairfield State Hospital, Newtown, Conn. DOCTOR WALKER will assume office on February 1, and will be acting superintendent until a superintendent is appointed.

## Illinois Dietitians to Meet

The annual meeting of the Illinois Dietetic Association will be held at the Belden-Stratford Hotel, Chicago, February 10 and 11.

The following discussions will be presented at the meeting: new concepts in dietetic management in kidney diseases; food poisoning and infections; new aspects of infant feeding; calcium balance in growing children; marketing; hotel and hospital kitchens. Among the speakers on the program are: Dr. Malcolm T. MacEachern, director of hospital activities, American College of Surgeons; Dr. Solomon Strouse, Michael Reese Hospital, Chicago; Frances Swain, director of home economics, Chicago public schools; Dr. F. W. Tanner, head of the bacteriology department, University of Illinois; Helen Bennett, a representative of A Century of Progress Exposition; Dr. A. H. Parmelee, Cook County Hospital, Chicago; Thelma Porter Levin, department of home economics, University of Chicago.

On Friday morning, the first day of the meeting, there will be trips to markets, hospitals, hotels and to A Century of Progress Exposition. Registration on Friday afternoon will be followed by addresses, discussions and a business meeting. The annual banquet will be held Friday evening.

The Saturday sessions will be devoted to addresses and discussions.

## Drafts Model Lien Law for Hospital

Dr. William C. Woodward, director, Bureau of Legal Medicine and Legislation, American Medical Association, has prepared a model lien law, the preliminary draft of which has been sent to several state medical associations for consideration. The title of the model law is "Draft of a Proposed Uniform State Act Concerning Liens for Money to Physicians, Dentists, Nurses, Hospitals and Others for Service Rendered for the Relief and Cure of Injury Caused by the Fault or Neglect of Other Persons."

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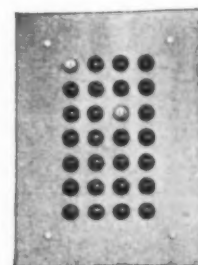
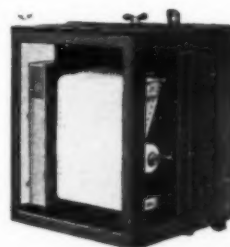
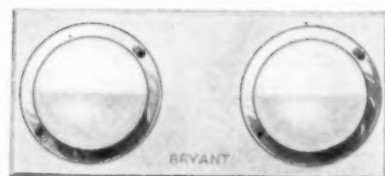
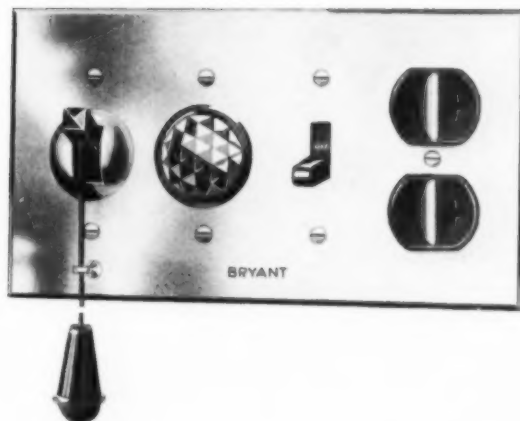
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## Hospital Reports Surplus Income

With 4,000 fewer patient days in 1932 than in 1931, the Peoples Hospital, Akron, Ohio, reports a surplus income of \$15,000 against a deficit in 1931 of \$34,000, and that the hospital cost per day was reduced by \$1.20. This unusual record is explained by various economies that were put into effect.

An executive committee of the board of trustees have for some time been meeting each day for luncheon at the hospital. Insurance premiums were cut drastically by revaluing buildings and equipment on a current replacement scale, a study of the heating plant enabled them to cut fuel costs 30 per cent, salary adjustments were among the methods responsible for this \$49,000 difference.

## Takes Over New York Hospital's Allergy Clinic

Roosevelt Hospital, New York City, has taken over the allergy clinic formerly conducted by New York Hospital, it was recently announced, the latter institution having found that a unit of the size and scope of its allergy service exceeded its prospective teaching requirements.

## Texas Hospital Association Names New Officers

Alice Taylor, superintendent, All Saints Hospital, Fort Worth, Tex., was recently named president, Hospital Association of the State of Texas, to fill the unexpired term of Rev. C. Q. Smith, superintendent, Methodist Hospital, Fort Worth, who has left hospital work. E. E. Collier, superintendent, West Texas Baptist Sanatorium, Abilene, was named first vice president of the association to fill the unexpired term of Sister Austin, who has resigned.

The meeting of the Hospital Association of the State of Texas will be held at Dallas, on March 17-18, at the Baker Hotel.

## Radiographers' Society Will Meet in Rochester

The American Society of Radiographers will hold its national convention in Rochester, N. Y., May 31 to June 3, it has just been announced. Hazel Englebrecht, Des Moines, Iowa, is chairman of the program committee.

## Hospital Director Publishes Volume of Poems

Dr. Frederic Brush, medical director, Burke Foundation for Convalescents, White Plains, N. Y., has just published his second book of poems, "The Long Hills." Eighteen years ago Doctor Brush published his first book of poems, "Susquehanna," which has gone through three editions.

"The Long Hills" is a saga of the Eastern pioneers who opened the path to the West by conquering the forests of the Alleghenies, opening new lands to the plow.

The book is published by the Roland Swain Company, Philadelphia.



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NOT only our own many years of manufacturing experience but the experience of hundreds of large institutions which we serve—this is your guarantee of quality and fitness in genuine Colson equipment produced in the Colson factory. We co-operate with executives to create equipment which meets advanced needs—durable, convenient, easily handled—all designed from an operating viewpoint to effect operating economies.



### This Linen Truck Speeds Maid's Task

Mounted on Colson Quiet Casters of large size it carries bed linen and all needed supplies from room to room and ward to ward. Ample canvas bags carry away soiled linen. Tray at top is convenient for small supplies. Moved by a touch and easily steered, this Colson Linen Service Truck keeps supplies at the maid's elbow, saving

many steps and economizing in needed help. Sturdily built, fully bumpered, they last long and meet every need. Made in two types beside one shown.

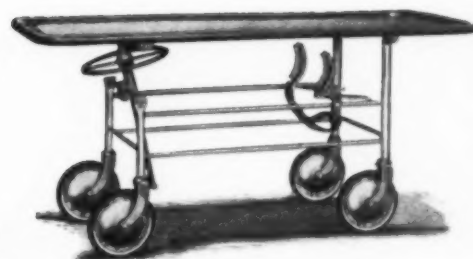
### Oxygen Tank Truck



Quick, safe handling of oxygen tanks calls for this advanced Colson appliance. Tank is loaded on it easily from floor position and tilted to safe angle, being strapped in place. There is potential disaster in careless handling of any high pressure tank. Use a Colson truck for safety, certainty, convenience.

### Appetizing Food Must be Served Hot

Colson Food Conveyors save re-handling of food and bring it to the ward or room with all its appetizing freshness—giving zest to meal time and conserving labor of the working staff. Thoroughly insulated, these conveyors retain the heat for considerable periods, but it can always be renewed by plugging in an ordinary lamp cord from any baseboard or lamp connection. Send for description of several types and sizes as well as Colson Catalog of institutional truck equipment.



### Elevating Litter Stretcher

Sturdy, convenient, mounted on large, silent swivel casters, this stretcher elevates at one or both ends. See catalog for other types and models.



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Above—Well type, from which food is dished in corridor, floor station or at bedside. Below—Shelf type for food dished in kitchen.

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Greater strength and freedom from snagging or tearing make these WILTEX Products most economical to use. Their greater freedom from aging enables you to carry complete stocks in all sizes and to take advantage of lowest quality prices.

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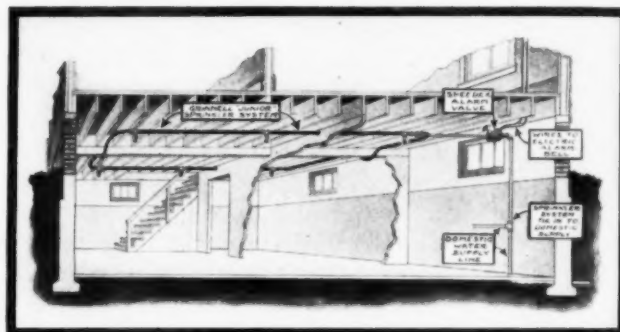
## FOR MODERN HOSPITALS

## NEWS FROM MANUFACTURERS

### SPRINKLER SYSTEM FOR SMALL BUILDINGS

A fire protection device, designed especially for installation in small nonfireproof buildings, called the Grinnell "Junior" Sprinkler System is being manufactured by the Grinnell Company, Providence, R. I. The device is low in price and can be installed easily, either during the erection of the building or later. It is connected to the regular water supply line and neither pressure pumps nor tanks are required.

The system is connected to the main water supply by a one-inch brass pipe which leads to an alarm valve that is wired to an electric alarm bell. The alarm valve is also a shut-off valve, and has a drain connection to prevent water in the pipes from freezing should the building be closed during the winter. Another brass pipe connects the valve



This diagram shows how the sprinkler system is installed.

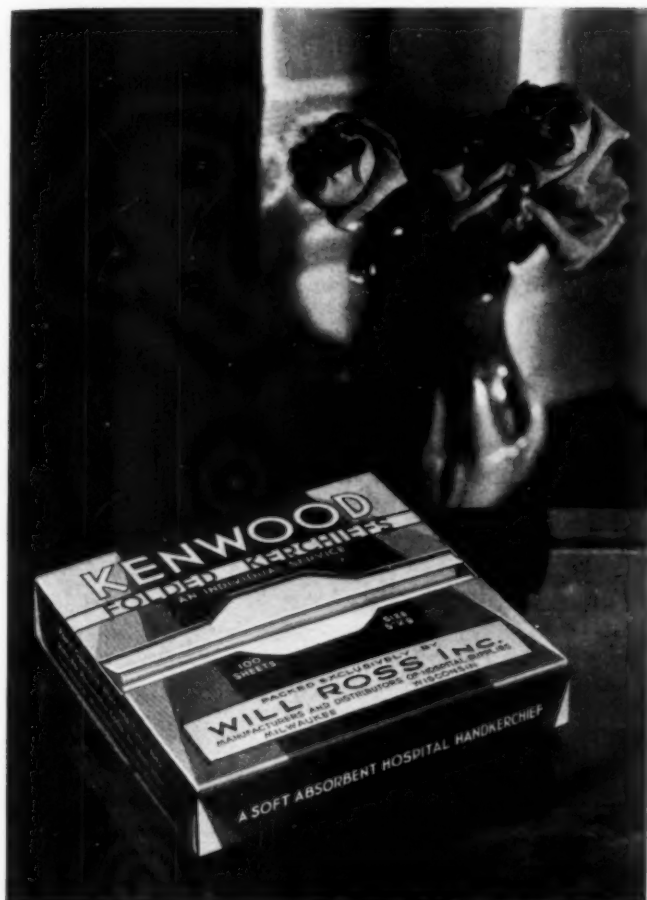
to the inlet fitting, which in turn is connected to the sprinkler sections. Each sprinkler section consists of a sprinkler head tee permanently attached on one end to twelve feet of three-quarter-inch copper tubing. The other end of the head tee is provided with a compression tubing connection and a compression nut for ease in joining the adjacent section. The copper tubing may also be obtained in straight lengths up to twenty feet and in coils up to sixty feet. These lengths will allow extending a supply line and return line from the basement to the attic, and make it possible to reach isolated points when sprinklers are not needed in intervening rooms. The points of greatest fire hazard in small buildings are the basement, the storage rooms, the kitchens and the laundry.

Where full fire protection cannot be incorporated structurally because of prohibitive building cost, protection can be obtained by the installation of a simple sprinkler system.

### AERO SYSTEM ASSURES FIRE PROTECTION

A fire detection system evolved by the American District Telegraph Co., 155 Sixth Avenue, New York City, under the name of the Aero automatic fire alarm, is designed to go into action at the first burst of flame. Signals are transmitted by direct, private wire to A. D. T. central stations where experienced operators are on duty at all times. The fire department is dispatched upon receipt of fire alarms, and owners or those in charge are notified. Guards are also sent to the premises to render assistance.

The fire detecting element comprises a small copper tube less than 1/12 inch in diameter which is placed along or



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Dozen ..... 4.00

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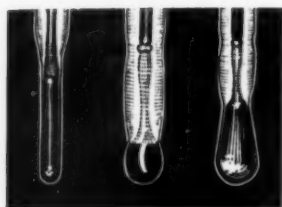


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around the ceilings or roof of the premises to be protected. This wire is exceedingly ductile and can be fitted into molding and ceiling decorations without marring their beauty.

In the event of fire, the air becomes heated and expands. At each end of the tube is a diaphragm or small metal box with thin sides, capable of being bulged outward by air pressure. The bulging of the diaphragm closes electrical contacts which operate a transmitter, automatically sending the alarm to an A. D. T. central station and the fire department. An annunciator placed on the outside of the protected premises indicates the floor or section of the building where the fire originated and an alarm is sounded on gongs throughout the premises.

Three types of service are offered: first, central station service which connects by private wire to A. D. T. stations; second, fire department service affording a direct, private wire to the local fire department where suitable devices are installed for receiving and recording alarms, and third, proprietary service which connects with an approved central station located exclusively within the protected premises.

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Announcement of a new model vegetable peeler is made by Josiah Anstice & Co., Inc., Rochester, N. Y., which is designed to combine maximum peeling efficiency with minimum vegetable waste. This model is offered in 30 and 50 pound sizes and has carborundum fused with iron on the peeling surface of both the cylinders and the disc. The disc has an upturned lip around the entire periphery and it rolls the vegetables about without bruising them.

Provision is made from the outside of the machine for oiling all moving parts, such as bearings and gears. All



*Hingeless covers and a built-in peeling trap are among the special features of this new model vegetable peeler.*

parts that require lubrication operate in an oil bath in an enclosed gear housing, which is designed to exclude water and dirt. This provides automatic lubrication for the main bearings, all of which are of the sleeve type and made of bronze alloy. There are no grease cups. The motor is placed above the peeler and the drive is through an endless belt which relieves the motor of starting shock. The drive is simple, safe and quiet and the belt is fully guarded. The switch that controls the starting and stopping of the motor

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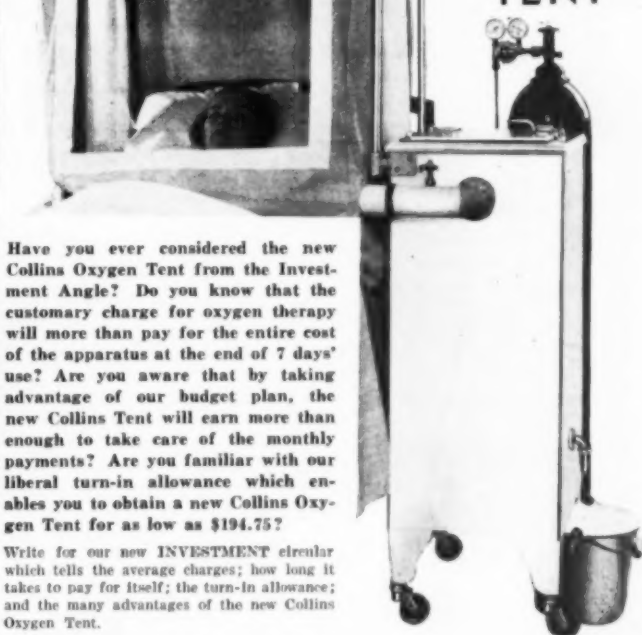
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